Statewide Fisheries Management Plan: Part II

Fisheries Management Direction for Drainages and Waterbodies

Introduction to Part II of the Plan

Part II of the Plan provides specific fisheries management direction for 40 drainages in the state of Montana (see statewide map below). Each drainage plan includes a drainage map, a narrative section, and a management direction table. The narrative section provides an overview of conditions in the drainage and consists of four parts: Physical Description, Fisheries Management, Habitat, and Fishing Access. The table provides management direction and habitat needs for individual species or groups of species on a waterbody basis in each drainage. Descriptions of the terms used in each column of the tables are as follows:

Water: Waters are listed beginning at the upstream end of the drainage and proceeding downstream. Mainstem waters are listed first, followed by tributaries and lakes off the mainstem.

Species: Not all species in the waterbody are listed in the table. Only those for which specific management direction has been established are listed. This list typically includes most principal game species, important forage species, and Species of Concern. If the species is native to the water, an (N) is included after the name.

Recruitment Source: Defined generally as where new members of a fish population come from. Three types of recruitment sources are indicated. More than one type may apply in any given situation:

A. **Hatchery.** Fish are stocked directly from a state, federal or private hatchery as fry, fingerlings or larger individuals. Applied primarily to lakes and ponds where natural reproduction is lacking or unable to meet angler demands. Includes eggs that were produced from wild brood, but hatched and raised in a hatchery prior to stocking.

B. **Wild.** Fish are naturally spawned and reared in their natural habitat. This applies to almost all stream and river fisheries in the state, as well as to some lakes and ponds where natural reproduction is capable of meeting angler needs. Also applies to situations where natural reproduction is assisted through the use of habitat enhancements to improve spawning and/or rearing conditions/success.

C. **Transfer**. Fish are wild, but transferred from one waterbody to another. Used primarily in eastern Montana to "seed" barren lakes which have suffered from drought or winterkill, or to provide forage for game species in receiving waters. Used on the lower Clark Fork River to describe the transport of bull trout above and below dams and wiers.

Management Type: Nine management types are identified. More than one type may apply in any given situation:

A. **Put and Take**. A management approach using stocking of catchable size (larger than 8 inches) hatchery rainbow trout to provide high consumptive catch rates. Applied to lakes,

ponds, and reservoirs and certain streams or stream reaches with good access and moderate to high fishing pressure. Used where long-term survival and growth is limited due to habitat characteristics or high harvest rates.

B. **Put, Grow and Take.** A management approach using various sizes of hatchery fish, but typically fry or fingerlings to provide angling opportunities on small lakes, ponds, and reservoirs and certain streams or stream reaches. The fish are stocked at sub-catchable sizes to be grown to catchable size and beyond. Used where long-term survival and growth are not limiting but spawning and rearing capacity are limiting.

C. **Liberal Regulations.** Exceptions to Fishing District Standard regulations are put in place to allow greater harvest (either through increased bag limits, expanded seasons, or relaxation of size limits and sometimes tackle restrictions) to limit impacts of one species on another, to reduce densities of a species to produce larger fish for angling purposes, or merely to allow for enhanced harvest opportunity on very abundant fish populations.

D. **Restrictive Regulations.** Exceptions to Fishing District Standard regulations are put in place to restrict harvest (either through reduced bag limits, restricted seasons, or restrictions on sizes of fish that may be taken) to meet conservation goals for and to protect native species, or to maintain or alter the size structure of a fish population to meet angler demands.

E. **Quality.** A management approach that changes, by regulation, the size and/or numbers of fish which may be harvested in order to provide increased catch rates for larger fish which are considered quality or trophy size. This type of management may be applied to water areas or to specific species.

F. **Conservation.** A management approach that may or may not allow angling and harvest in order to protect and rebuild the viability of a native fish population. This type is used in situations where management efforts (fishing regulations, habitat enhancements, land acquisitions, flow leases, etc) are actively underway or contemplated to protect and rebuild populations. This type may also be applied to native non-game species or species groups.

G. **Family Fishing Water.** A management approach applied to a water body emphasizing family-oriented fishing opportunities typically with harvest opportunities and simplified rules including no size restrictions. Includes waters classified as Children's Fishing Waters in Fishing Regulations Booklet.

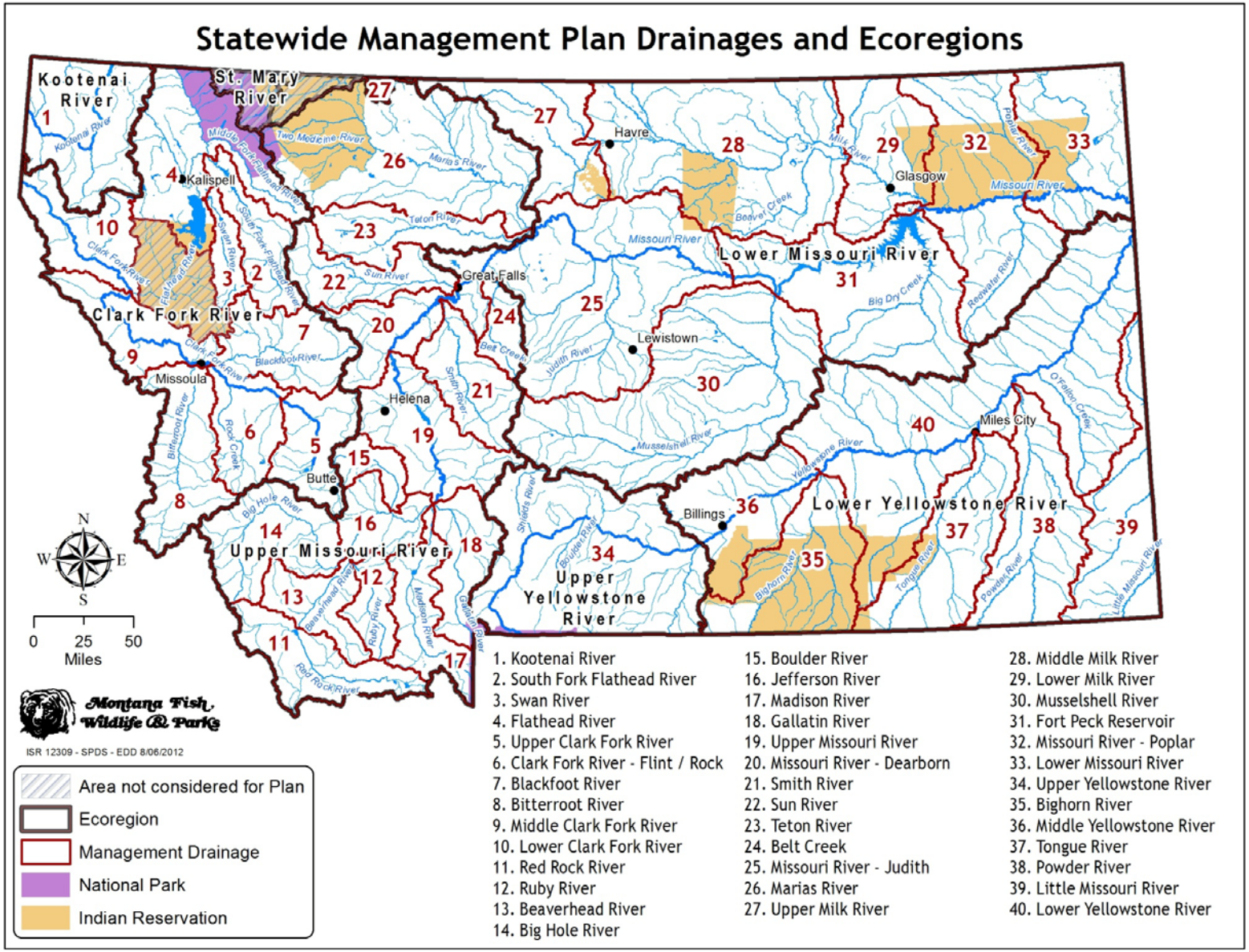
H. **Suppression**. A management approach that relies on one or more means to reduce or eliminate the presence of a species. The means may include liberal angler harvest limits and/or incentives, commercial fishing, and mechanical or chemical removal. Applied to situations where the species being suppressed compromises fishery goals (native and/or recreational fisheries) in that waterbody.

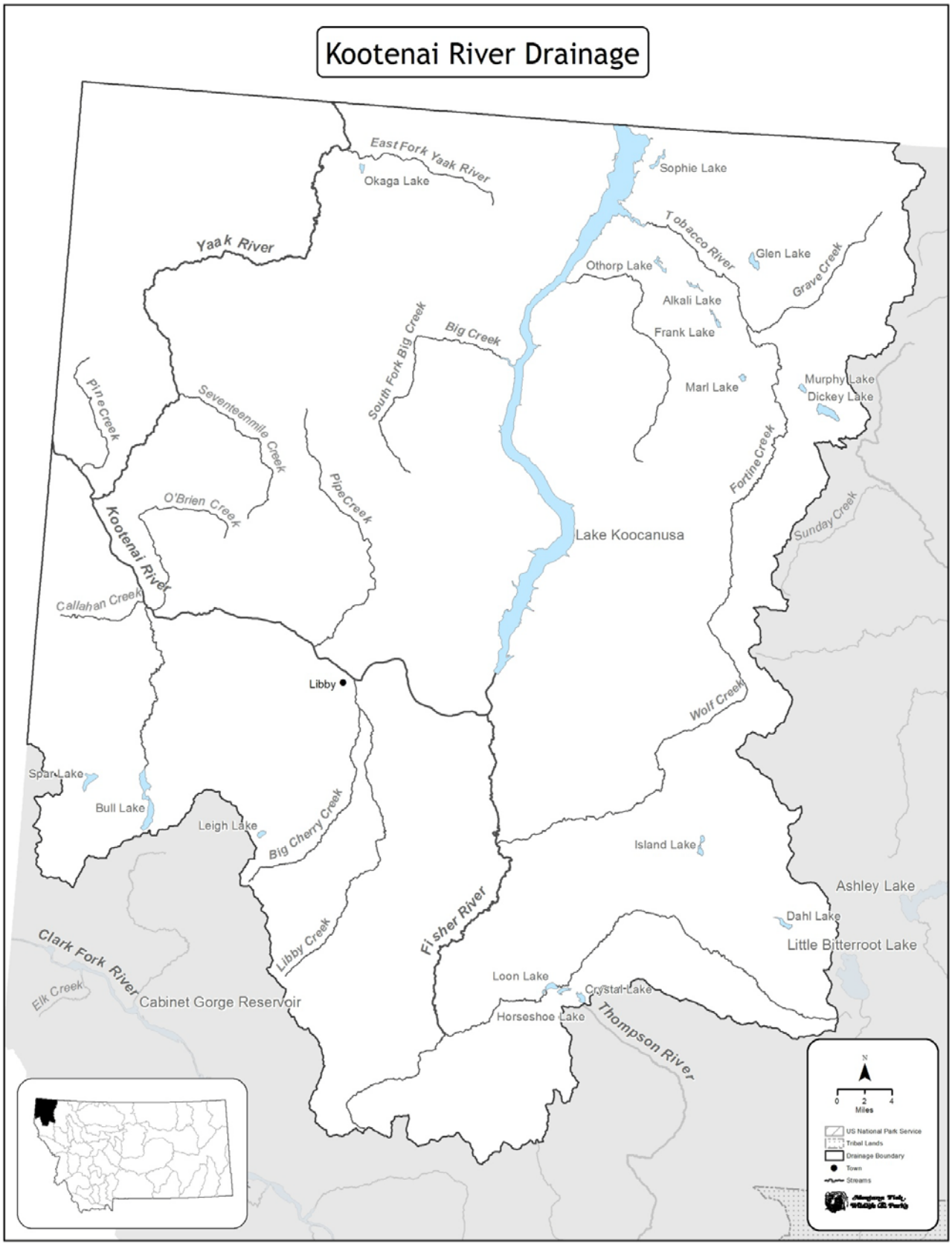
I. **General.** A general management approach applied to waters which do not fit the designations above and are typically considered harvest fisheries (in the case of game species). Fishing is managed through natural production and no special regulations are applied. Can apply to either native or introduced species.

Management Direction: Describes more specific management prescriptions. Two terms are frequently used:

A. **Recreational fishery.** This refers to a fishery with enough angler interest to generate management emphasis or effort. Recreational fisheries include situations with a full spectrum of harvest, ranging from waters where low levels of harvest occur (large stream trout fisheries) to situations where high harvest for consumption often occurs (kokanee fisheries, lakes with yellow perch or stocked trout).

B. **Quality fishery.** Refers to a fishery where the species excels in terms of either catch rates, large sizes, numbers of fish or fish in good condition.


Statewide Management Plan Drainages and Ecoregions
Kootenai River
St. Mary River
Clark Fork River
Upper Missouri River
Lower Missouri River
Lower Yellowstone River
Upper Yellowstone River
Kalispell
Missoula
Helena
Butte
Great Falls
Havre
Glasgow
Lewistown
Miles City
Billings
N
W
E
S
0 25 50
Miles
Montana Fish, Wildlife & Parks
ISR 12309 - SPDS - EDD 8/06/2012
Area not considered for Plan
Ecoregion
Management Drainage
National Park
Indian Reservation
1. Kootenai River
2. South Fork Flathead River
3. Swan River
4. Flathead River
5. Upper Clark Fork River
6. Clark Fork River - Flint / Rock
7. Blackfoot River
8. Bitterroot River
9. Middle Clark Fork River
10. Lower Clark Fork River
11. Red Rock River
12. Ruby River
13. Beaverhead River
14. Big Hole River
15. Boulder River
16. Jefferson River
17. Madison River
18. Gallatin River
19. Upper Missouri River
20. Missouri River - Dearborn
21. Smith River
22. Sun River
23. Teton River
24. Belt Creek
25. Missouri River - Judith
26. Marias River
27. Upper Milk River
28. Middle Milk River
29. Lower Milk River
30. Musselshell River
31. Fort Peck Reservoir
32. Missouri River - Poplar
33. Lower Missouri River
34. Upper Yellowstone River
35. Bighorn River
36. Middle Yellowstone River
37. Tongue River
38. Powder River
39. Little Missouri River
40. Lower Yellowstone River


Kootenai River Drainage
East Fork Yaak River
Okaga Lake
Sophie Lake
Yaak River
Tobacco River
Glen Lake
Othorp Lake
Grave Creek
Alkali Lake
Frank Lake
South Fork Big Creek
Big Creek
Marl Lake
Murphy Lake
Dickey Lake
Pinecreek
Seventeenmile Creek
Fortine Creek
O'Brien Creek
Pipe Creek
Kootenai River
Lake Koocanusa
Sunday Creek
Callahan Creek
Libby
Wolf Creek
Spar Lake
Bull Lake
Leigh Lake
Big Cherry Creek
Island Lake
Ashley Lake
Dahl Lake
Little Bitterroot Lake
Clark Fork River
Libby Creek
Fisher River
Loon Lake
Crystal Lake
Elk Creek
Cabinet Gorge Reservoir
Horseshoe Lake
Thompson River
N
0 2 4
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

KOOTENAI RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Kootenai River drainage is located in the extreme northwest corner of Montana and is entirely in Lincoln County. It originates in southeastern British Columbia (BC), flows south and west through Montana, and northwest through Idaho, then returns to Canada where it flows through Kootenay Lake and joins the Columbia River at Castlegar, BC. At the Idaho border near Leonia (lowest point in Montana 1820 ft above sea level), it drains approximately 13,000 square miles with an average discharge of 16,100 cfs. There are 110 lakes or reservoirs in the Kootenai River Drainage, totaling 34,869 surface acres.

Libby Dam was completed in 1972 and created Lake Koocanusa which inundated and eliminated 109 miles of the mainstem Kootenai River and 40 miles of critical, low-gradient tributary habitat in Montana and BC. At full pool, Lake Koocanusa covers 46,500 acres total and 28,723 acres in Montana. A selective withdrawal system was installed on Libby Dam to control the temperature of water releases from the dam. The operation of Libby Dam for flood control and power production has changed the natural seasonal and daily flow, temperature, and productivity regimes in the Kootenai River. Mean flows during spring runoff have declined 50 percent and wintertime flows have increased substantially. Average wintertime water temperatures have increased by about 7^{o} F, resulting in the river remaining virtually ice free. The 104 miles of Kootenai River in Montana can be divided into two distinct reaches, the 54-mile section downstream of Libby Dam (Lower Kootenai) and the 50-mile section upstream of Libby Dam (Lake Koocanusa).

LOWER KOOTENAI RIVER

The 54-mile section of Kootenai River downstream of Libby Dam is characterized by a complex combination of riffles, pools and slow moving, broad, meandering river sections. About 28 miles downstream of Libby Dam the river cascades 30 feet over the main Kootenai Falls and then drops another 60 feet through smaller falls in just less than a mile. Downstream of Kootenai Falls the river flows through a canyon which forms pools as deep as 100 feet. From there it flows similarly to the river upstream of Kootenai Falls but with more deeper, slower moving runs to the Montana/Idaho border.

Numerous tributaries drain the Cabinet, Selkirk and Purcell mountain ranges and enter the Kootenai River directly or through larger tributaries. Due to past glaciations, some Kootenai River tributaries are blocked by falls near their mouths, and recruitment of fish to and from those tributaries is limited. The majority of waters in the Kootenai River produce fishing for trout. The Kootenai River and its tributaries, mountain lakes (including those in the Cabinet Wilderness and Northwest Peaks), lowland lakes (including portions of the Thompson Chain of Lakes), Bull, Spar, Island and Kilbrennan Lakes and Fisher River, Yaak River and Libby Creek all provide some type of recreational fishing.

LAKE KOOCANUSA

The approximately 50-mile section of Kootenai River upstream of Libby Dam is completely inundated by Lake Koocanusa. Tributaries drain the Whitefish, Salish and Purcell mountain ranges and Southern Continental Range and enter the Kootenai River in British Columbia or Lake Koocanusa directly or through larger tributaries. The majority of streams that flow into Lake Koocanusa provide fishing for trout. Lake Koocanusa and its tributaries (most notably the Tobacco River and Big Creek), mountain lakes (including in and around the Ten Lakes Scenic Area), lowland lakes (including the Eureka Chain Lakes) and Dickey and Murphy Lakes all provide some type of recreational fishing.

FISHERIES MANAGEMENT

The Kootenai River and all its tributaries are managed as wild trout fisheries, emphasizing natural reproduction. The basin is also the focus of native fish recovery efforts. There are over 60 mountain and valley lakes and reservoirs in the Kootenai drainage that consistently provide more than 100,000 angler days of fishing for trout, salmon and other species of fish. There are sixteen native fish species in the Kootenai River drainage including bull trout, white sturgeon, redband trout, westslope cutthroat trout, burbot, kokanee salmon, mountain and pygmy whitefish, northern pike minnow, peamouth chub, longnose dace, redside shiner, longnose and largescale suckers, and torrent and Columbia slimy sculpins. Eleven nonnative fish species inhabit the Kootenai including brook trout, brown trout, rainbow trout, lake trout, northern pike, smallmouth and largemouth bass, yellow perch, black crappie, pumpkinseeds and black bullheads.

Inland redband trout (Montana's only native rainbow trout) are found in the Kootenai River drainage in the mainstem Kootenai River downstream of Libby Dam and above barriers in some tributaries (primarily in the Yaak and Fisher rivers and Libby and Callahan creeks).

Unfortunately, hatchery rainbow trout have been widely introduced throughout the drainage since before the turn of the last century. Genetics work indicates that pure-strain redband populations are rare and historic stocking of coastal strains of rainbow trout have produced a naturalized wild hybridized population and has caused loss of much of the original distribution for redband trout. Though several tributaries to the Kootenai River have relatively low levels of hybridization, the only truly secure pure-strain redbands are in Callahan Creek and East Fork Yaak River, where barrier falls stop access of hybridizing species.

Large (up to 30 lbs) rainbow trout exist downstream of Libby dam to near the Fisher River (3.5 river miles). The trout grow large because kokanee salmon from Lake Koocanusa are entrained through the dam and provide an excellent food source on which to grow. These rainbow trout migrate very little and through the years appear to have created a genetically unique population. Restrictive regulations have been in place since 1994 to protect and enhance this population.

Bull trout are found throughout the Kootenai River drainage, with fluvial populations moving throughout the Lower Kootenai and the major tributaries of the Fisher River, Libby Creek and Quartz Creek upstream of Kootenai Falls and Callahan Creek and O'Brien Creek downstream of the Falls. Two adfluvial populations exist: 1) Lake Koocanusa where some spawn in Grave Creek, but the vast majority spawn and rear in British Columbia tributaries, especially the Wigwam River; and 2) Bull Lake, a disjunct population separated from the main Kootenai by a falls on Lake Creek. Resident life forms likely exist in many smaller tributaries throughout the drainage, although the only confirmed resident population exists in Libby Creek upstream of

Libby Falls. Special fishing regulations (timing closures, complete closures) exist on some spawning streams to protect bull trout. The fishing closure between Libby Dam and Fisher River to protect spawning rainbow trout also serves to protect bull trout during that time.

In 2004, the FWS authorized limited sport fishing for bull trout on Lake Koocanusa as requested by FWP after those fisheries were deemed to have reached recovery goals. This activity was intended to benefit the species by researching the effects of restoring recreational fishing. In addition, allowing angling for bull trout increased public support for management of a stable bull trout population in Lake Koocanusa. One condition of the permit from the USFWS called for a bull trout permit and catch card system, angler survey, and development of educational information pertaining to the new fishery. The seventh year of the angling for bull trout in Lake Koocanusa concluded in 2011. Since 2004, just over 12,000 anglers obtained catch cards; they spent over 28,000 days fishing for bull trout, caught more than 14,000 and harvested 2,182 bull trout. Anglers released nearly 90 percent of the bull trout they caught at Lake Koocanusa. In 2012, MFWP determined that harvest (both in Montana and British Columbia) had negatively affected the bull trout population enough to warrant changing the regulation to catch and release. The regulation will remain in effect while FWP determines the most prudent way to re-establish the harvest fishery. This will include efforts to work with British Columbia to create commensurate regulations.

Burbot (ling) are native to the Kootenai River drainage, upstream of Libby dam in Lake Koocanusa and Sophie and Glen Lakes, and downstream in the mainstem Kootenai River. Since the creation of Libby Dam, the downstream population has decreased substantially from historic levels. Over-fishing and lack of successful reproduction are considered to be the main reasons for the population decline. This is likely caused by alteration of the natural flow regime for flood control and power production, and the changes to the river ecosystem in terms of flow, substrate, temperature and nutrients. Elimination of former sloughs and backwaters from decades of diking (in Idaho) are also suspected of contributing to their decline. Though fishing regulations still allow for harvest of burbot in the Kootenai River, the angling effort has dropped to near zero. The burbot population in Lake Koocanusa has fared slightly better. Burbot numbers expanded substantially after Lake Koocanusa was initially formed. As the reservoir has aged, numbers and fishing pressure have waned, although there is still a stable population. A fishing closure during spawning (January 15 through February 28) was enacted in 1992 at the request of local anglers.

The Kootenai downstream of Kootenai Falls is also home to a genetically distinct population of white sturgeon. The fishery for white sturgeon has been closed for conservation purposes since 1979 in response to major declines in this population. The Kootenai River white sturgeon was listed as an Endangered Species in 1994. The Kootenai River White Sturgeon Recovery Strategy is currently guiding recovery actions in the basin including flow manipulation, habitat improvement and hatchery supplementation.

Other native salmonids include westslope cutthroat trout and mountain whitefish. Non-native brook trout are present throughout the drainage. Brown trout were illegally introduced and first discovered in Lake Creek, but are now found in the Kootenai River downstream of Kootenai Falls. Kokanee salmon from Lake Koocanusa--entrained through Libby Dam--also enter the Kootenai River. Nonnative lake trout are found in Spar Lake (closed basin) and have also been found downstream of Libby Dam. While the origin of these fish in the Kootenai River is unknown, it is probably from an illegal plant.

HABITAT

The Kootenai River basin has annual precipitation ranging from 20-80 inches and snowfall from 40-300 inches. Except during spring runoff when the river and reservoir experience increased turbidity, suspended sediment in the river is generally minimal, making the Kootenai River and Lake Koocanusa clear with good visibility for most of the year.

Roughly 90 percent of the drainage is forested and logging and associated road building has occurred in nearly all of the lower-elevation valleys and on many higher-elevation ridges. The combination of legacy of land management, roading and some large flood events have altered many streams and led to over-widened and braided sections. Streams in this condition tend to have mobile substrates that are less hospitable for insects and therefore numbers of salmonids.

Coal and hard rock mining are prominent activities in the Kootenai basin, particularly along the Elk and St. Mary rivers in BC and in the northern Cabinet Mountains. Recently proposed additional open pit coal mining has led the Montana Department of Environmental Quality to list Lake Koocanusa as threatened due to selenium. The Sullivan Mine at Kimberley, BC has been the largest metal producer in the basin and in 1981 it was one of the two largest lead-zinc mines in the world. From 1981 to the present, a large copper and silver mine and chemical floatation mill has operated in the Lake Creek watershed south of Troy, MT. Another copper silver mine (Montanore) is proposed in the headwaters of the Libby Creek drainage.

Dam operations represent the greatest impact to habitat in the Kootenai River because of the biological effects associated with unnatural flow fluctuations, reversed hydrograph (high flows in winter, low flows in summer), and real potential for gas supersaturation problems arising from spilling water. Water temperatures and seasonal thermal regimes of the Kootenai River have been unnaturally altered by the construction of Libby Dam. The selective withdrawal system which was installed on Libby Dam to control water temperatures has provided for the release of more natural water temperatures from late spring through fall; however, the system does not operate during winter months due to isothermal conditions of the reservoir and consequently, winter water temperatures remain warmer than prior to closure of Libby Dam.

Dam operations also impact fish populations in Lake Koocanusa. After an initial surge of productivity when the reservoir was first formed, there has been a slow decline in productivity toward oligotrophy (very low productivity). Between 1977 and 2000, reservoir drawdowns averaged 111 feet, and although they have not been as dramatic since then, they still affect all biological trophic levels and influence the probability of subsequent refill during spring runoff. The reservoir has shifted from a westslope cutthroat/mountain whitefish dominated system to one dominated by northern pike minnow, peamouth chub and kokanee salmon.

The Bonneville Power Administration is required to mitigate for the construction and operation of Libby Dam, and accomplishes much of this by funding the FWP fisheries mitigation program. Mitigation efforts, both onsite (operational) and off-site, are underway to protect, reopen, or reconstruct habitat to partially offset the loss.

FISHING ACCESS

There are 6 publicly owned or managed access sites along the Kootenai River. Acquiring additional access sites along the Kootenai River is a goal, especially downstream of Libby. There are seven (plus one proposed) publicly owned accesses on Lake Koocanusa that access the reservoir at various drawdown levels. The Koocanusa access sites also provide convenient land-based recreation opportunities. None of the Koocanusa or Kootenai River sites are owned by FWP. There are also more than 30 publicly owned/operated boating access sites at many of the larger valley lakes in the drainage.

SPECIAL MANAGEMENT ISSUES

Rainbow trout numbers and mean relative weights directly downstream of Libby Dam have decreased dramatically in recent years and are lower than rainbow trout collected historically and in other downstream sections of the Kootenai River. Possible reasons for the lower condition near Libby Dam include water temperatures, an altered invertebrate community, and presence of a nuisance diatom, *Didymosphenia geminata* that has affected the Kootenai River since 2000. Commonly referred to as "Didymo" or “rock snot”, this diatom is found mostly in cold clear streams and rivers including downstream of dams in much of North America. Didymo attaches itself to the streambed by a long stalk and poses a threat to the aquatic ecosystem because it forms extensive mats on stream beds. Those mats exclude many aquatic insect species important to salmonids. Mat production by Didymo is lowest in the summer and early fall months following elevated discharges from Libby Dam. The mats begin to die off in late March and early April and elevated discharges for white sturgeon recovery will remove varying amounts of mat material but never all of the diatoms. During peak mat production, Didymo has the potential to exclude important aquatic invertebrate species including mayflies and caddisflies.

FISHERIES MANAGEMENT DIRECTION FOR KOOTENAI RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Lake Koocanusa	46,500 acres total 28,723 acres in Montana	Bull trout (N)	Wild	Conservation/ Restrictive regulations	Provide catch-release recreational opportunity and reinstate limited harvest if compatible. Monitor recreational fishery including by-catch by anglers fishing for large rainbow trout and during derbies. Monitor population in Montana and work with British Columbia counterparts to establish adequate protection to insure opportunity for angling on both sides of the border.
		Rainbow trout	Wild	Quality	Manage harvest to promote trophy fishery opportunity. Monitor recreational fishery all year including during derbies.
		Gerrard rainbow trout	Hatchery	Put-Grow-Take/ Restrictive Regulations/Quality	Provide trophy harvest and recreational fishery. These are sterile progeny of trout known to reach trophy size. Maintain no-take regulations for marked fish less than 22 inches to promote growth to trophy size.
		Kokanee salmon	Wild	Liberal Regulations	Manage harvest to enhance numbers and sizes. Monitor population in Montana and British Columbia to identify population structure and opportunities to improve length at harvest for angling on both sides of the border.
		Burbot (N)	Wild	Restrictive Regulations	Manage harvest to protect spawning adults. Monitor population in Montana and British

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					Columbia to identify population structure and opportunities to improve length at harvest for angling on both sides of the border. Identify potential for population enhancement through hatchery augmentation
Habitat needs and activities: In cooperation with MDEQ, monitor lake water and sediment quality and fish to determine effects of selenium produced from British Columbia open-pit coal mines. Identify reservoir operations that improve reservoir productivity and quality angling.					
Tobacco River and Tributaries - Headwaters downstream to Lake Koocanusa	22.9 miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies to improve habitat in core areas. Work with irrigators and agencies to eliminate adult loss and reduce/eliminate fry loss in system
		Westslope cutthroat trout (N)	Wild	General	Enhance fluvial populations for conservation and angling opportunities.
		Rainbow trout	Wild	General	Maintain current angling opportunity and harvest level.
		Brook Trout	Wild	Suppression	Where practical, maintain liberal harvest opportunities. Where feasible reduce/eliminate competing populations to meet native species goals.
Habitat needs and activities: Water rights are over allocated in Grave Creek; work with irrigators to maintain/improve flows to support native species.					
Eureka Chain Lakes Frank Rock Lost Timber Rock	 149 acres 37 acres 35 acres 31 acres	Rainbow trout, (Gerrard, Eagle Lake, Redband)	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level. For Lost Lake, manage trout harvest to enhance size. Do strain evaluation to determine age class success and return to creel.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Other Small Lakes		Kokanee salmon	Hatchery	Put-Grow-Take	Where and when feasible (Frank Lake) based on hatchery availability and water quality (alkalinity levels), provide opportunity for recreational harvest
		Brook trout	Hatchery	Put-Grow-Take	Conduct EA on feasibility of re-introducing brook trout into selected closed basin lakes
Habitat needs and activities: Monitor total alkalinity, dissolved oxygen levels and lake elevations to help determine stocking success					
Glen Lake	301 acres	Kokanee	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level. Continue to monitor population and determine stocking rates that promote opportunity for larger kokanee.
		Rainbow trout (Gerrard)	Hatchery	Quality	Explore opportunity to stock limited number of gerrard rainbow trout to produce trophy fishery
		Burbot	Wild	General	Identify source of burbot. Maintain limited harvest and recreational opportunity. Monitor population to identify population structure and opportunities to improve length at harvest for quality angling through regulation. Identify potential for population enhancement through hatchery augmentation
Habitat needs and activities: Work with Lincoln County to reduce impacts of shoreline construction. Lake elevations are controlled by Glen Lake irrigation district.					
Ten Lakes Scenic area lakes: Big Therriault Little Therriault Rainbow	 56 acres 28 acres 9 acres	Westslope cutthroat trout (N)	Wild/Hatchery	Put-Grow-Take/ General	Maintain current angling opportunity and harvest level. Where practical enhance populations to meet native species goals. Where feasible, protect non-introgressed populations and restore genetic integrity to introgressed populations. Adjust/eliminate

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Upper Wolverine Lower Wolverine Bat Blue Bird	8 acres 5 acres 5 acres 3 acres				stocking in lakes with natural reproduction.
Tetrault (Carpenter) Lake	96 acres	Rainbow trout (Gerrard), Eagle Lake, redband), Westslope cutthroat trout	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level.
Sophie Lake	221 Acres	Rainbow trout (Gerrard, Eagle Lake, Redband) Westslope cutthroat trout Kokanee salmon Burbot	Hatchery Hatchery Wild	Put-Grow-Take Put-Grow-Take General	Maintain current angling opportunity and harvest level. When feasible based on hatchery availability, provide opportunity for recreational harvest Identify source of burbot. Maintain limited harvest and recreational opportunity. Monitor population to identify population structure and opportunities to improve length at harvest for quality angling through regulation. Identify potential for population enhancement through hatchery augmentation
Kootenai River and Tributaries - Libby Dam Downstream to Fisher River	3.5 miles	Bull Trout (N) Rainbow trout Mountain whitefish (N)	Wild Wild Wild	Conservation Quality/ Restrictive Regulations General	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies and mining interests to improve habitat in core areas. Continue to improve fishery through restrictive regulations to promote trophy sizes. Identify limiting factors leading to recent declines. Maintain numbers. Continue to monitor

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					population size and trend.
Habitat needs and activities: Identify limiting factors associated with *Didymosphenia geminata* and determine if blooms/mats can be reduced to improve fishery.					
Fisher River and Tributaries - Headwaters to Kootenai River	33.2 miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies and mining interests to improve habitat in core areas.
		Redband trout (N) , Westslope cutthroat trout (N)	Wild	Conservation	Maintain current angling opportunity and harvest level. Where feasible enhance populations to meet native species goals. Where feasible, protect non-introgressed populations and restore genetic integrity to introgressed populations
		Rainbow trout	Wild	General/Suppression	Where practical, maintain current angling opportunity and harvest level. Where feasible reduce/eliminate hybridized populations to meet native species goals
		Brook trout	Wild	Suppression	Where practical, maintain liberal harvest opportunities. Where feasible reduce/eliminate competing populations to meet native species goals.
Habitat needs and activities: Fisher River impacted by road and railroad construction. Investigate methods to improve habitat.					
Happy's Inn Small Lakes: Leon Bootjack Cibid Topless	 19 acres 12 acres 11 acres 9 acres	Rainbow trout (Redband, Arlee) and Westslope cutthroat trout	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level. In Cibid Lake, promote redband trout. In Cad Lake promote westslope cutthroat trout. In other lakes, stock rainbow trout and westslope cutthroat trout on alternate years.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Cad	4 acres				
Crystal Lake Lavon Lake	184 acres 17 acres	Kokanee salmon	Hatchery/ Wild	Put-Grow-Take	Manage harvest and stocking levels to enhance numbers and sizes. Continue to monitor contribution to population of hatchery versus wild kokanee and determine stocking rates that promote opportunity for larger kokanee.
		Redband trout	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level. Continue to monitor population to determine if redbands will switch to piscivorous diet of kokanee and produce opportunity for larger trout.
		Yellow Perch	Wild	General	Reduce or eliminate yellow perch to benefit recreationally important kokanee salmon
Horseshoe Lake	138 acres	Tiger muskellunge	Hatchery	Quality/Restrictive Regulations	Manage for trophy opportunity and to maintain pressure on northern pikeminnow and sucker populations to improve opportunity to establish a limited salmonid fishery. Stock limited numbers on alternate years.
		Kokanee salmon	Hatchery	Put-Grow-Take	Manage harvest and stocking levels to enhance numbers and sizes. Establish and monitor success of stocking in this high predator system
Loon Lake Little Loon Lake	222 Acres 9 Acres	Northern pike (Illegally introduced)	Wild	General	Continue to provide for liberal harvest to provide for recreational opportunity and decrease predation on yellow perch and bass.
		Largemouth bass	Wild	Quality	Maintain current angling opportunity and

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					harvest level. Through regulation, enhance opportunity for trophy sizes.
		Smallmouth bass	Hatchery	Quality/Put-Grow-Take	Maintain current angling opportunity and harvest level. Through regulation, enhance opportunity for trophy sizes. Determine if continued stocking is warranted.
Island Lake Lynch Lake	221 Acres 41 Acres	Yellow perch	Wild	Quality	Maintain current angling opportunity and harvest level. Monitor population structure to determine if quality perch population can be sustained.
		Largemouth bass	Wild/ Hatchery	Quality/Put-Grow-Take	Maintain current angling opportunity and harvest level. Through regulation, enhance opportunity for trophy sizes. Identify if continued stocking is warranted
		Northern pike (illegally introduced)	Wild	General/Suppression	Provide for liberal harvest to provide for recreational opportunity and decrease predation on yellow perch and bass.
Kootenai River and Tributaries (Fisher River to Kootenai Falls.)	28.6 Miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies and mining interests to improve habitat in core areas. Enhance fluvial populations for conservation and WCT angling.
		Rainbow trout	Wild	Restrictive Regulations	Manage harvest to enhance numbers and sizes
		Mountain whitefish (N)	Wild	General	Maintain numbers. Continue to monitor

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					population size and trend.
Habitat needs and activities: Improve habitat to support ecosystem function and production of trout and whitefish. Identify limiting factors associated with *Didymosphenia geminata* and determine if blooms/mats can be reduced to improve fishery					
Libby Creek and Tributaries (Headwaters to Kootenai River)	29.2 MIles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies and mining interests to improve habitat in core areas.
		Redband trout (N)	Wild	Conservation	Maintain current angling opportunity and harvest level. Where feasible enhance populations to meet native species goals.
		Westslope cutthroat trout (N)	Wild	Conservation	Where feasible, protect non-introgressed populations and restore genetic integrity to introgressed populations
		Rainbow trout	Wild	General/Suppression	Where practical, maintain current angling opportunity and harvest level. Where feasible reduce/eliminate hybridized populations to meet native species goals
		Brook trout	Wild	Suppression	Where practical, maintain liberal harvest opportunities. Where feasible reduce/eliminate competing populations to meet native species goals.
Cabinet Wilderness Lakes Leigh Upper Cedar Granite Upper Hanging	 129 acres 63 acres 57 acres	Redband trout (N), Westslope cutthroat trout (N)	Wild/ Hatchery	Put-Grow-Take/ General	Maintain current angling opportunity and harvest level for high mountain lake angling opportunity. Where practical enhance populations to meet native species goals. Where feasible, protect non-introgressed populations and restore genetic integrity to

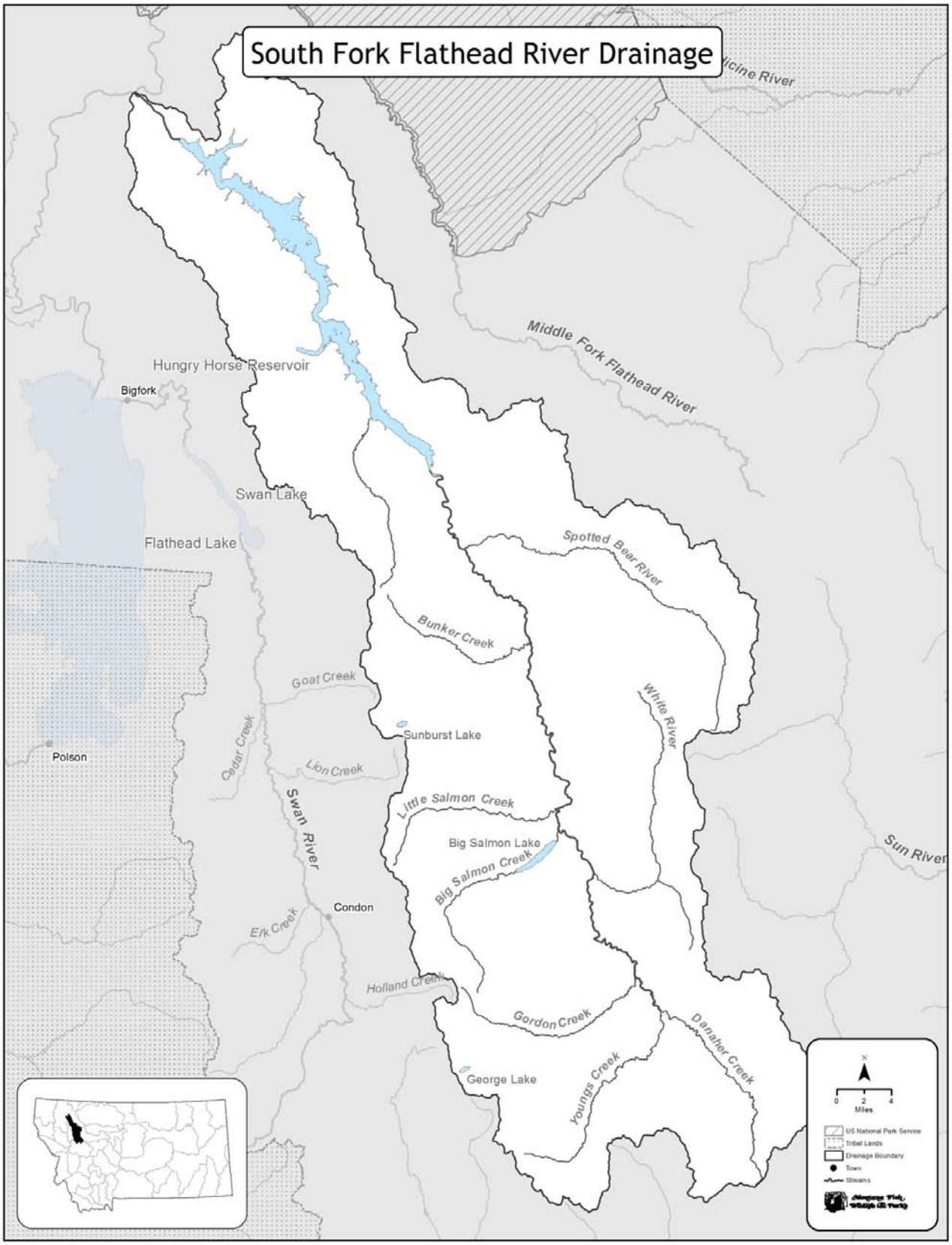
Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Valley Double Lower Geiger Lower Sky Lower Hanging Valley Minor Lower Cedar Wishbone Upper Geiger Barlee Big Bear Bramlet	53 acres 37 acres 34 acres 23 acres 21 acres 20 acres 19 acres 16 acres 13 acres 10 acres 9 acres 9 acres	Brook trout	Wild	General/Suppression	introgressed populations. Adjust/eliminate stocking in lakes with adequate natural reproduction. Where practical, maintain current angling opportunity and harvest level. Where feasible reduce/eliminate competing populations to meet native species goals
Kootenai River and Tributaries (Kootenai Falls to Idaho Border).	21.7 Miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies and mining interests to improve habitat in core areas. Enhance fluvial populations for conservation and WCT angling.
		Rainbow trout	Wild	General	Manage harvest to enhance numbers and sizes.
		Brown trout	Wild	Suppression	Identify status of this recently illegally introduced species. Identify opportunities to reduce or eliminate to benefit native fish and recreationally important rainbow trout
		Mountain whitefish (N)	Wild	General	Maintain numbers. Survey population size and trend.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Yaak River and Tributaries (Headwaters to Kootenai River)	53.4 Miles	Redband trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Maintain current angling opportunity and harvest level. Where feasible enhance populations to meet native species goals. Where feasible, protect non-introgressed populations and restore genetic integrity to introgressed populations
		Rainbow trout	Wild	General/Suppression	Where practical, maintain current angling opportunity and harvest level. Where feasible reduce/eliminate hybridized populations to meet native species goals
		Brook trout	Wild	General/Suppression	Maintain liberal harvest opportunities. Where feasible reduce/eliminate competing populations to meet native species goals.
Bull Lake	1162 Acres	Bull trout (N)	Wild	Conservation	Closed to angling. Educate anglers on catch-and-release techniques to reduce by-catch mortality. Continue to work with agencies to improve habitat in core area
		Westslope cutthroat trout (N)	Wild	General	Maintain current angling opportunity and harvest level. Consider regulations that better promote native species goals.
		Kokanee salmon	Wild/Hatchery	Put-Grow-Take	Manage harvest and stocking levels to enhance numbers and sizes. Monitor contribution to population of hatchery versus wild kokanee and determine stocking rates that promote opportunity for larger kokanee.
		Northern pike Largemouth bass smallmouth bass (all	Wild	Suppression	If feasible reduce/eliminate populations by liberalizing regulations to meet native species

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		illegally introduced)			and recreational kokanee fishing goals.
Habitat needs and activities: Work with agencies and others to protect/maintain/enhance Keeler Creek spawning and rearing habitat for bull trout. Monitor lake for Eurasian water milfoil known in the vicinity (Clark Fork drainage)					
Spar Lake Little Spar Lake	383 Acres 37 Acres	Lake trout	Wild	General	Maintain current angling opportunity and harvest level. Consider liberalizing limits to reduce numbers to improve size and benefit Put-Grow-Take fisheries.
		Westslope cutthroat trout (N), Rainbow trout	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level. In Little Spar Lake promote westslope cutthroat trout exclusively. In Spar Lake determine stocking rates and species/strains to best promote return to creel in a lake dominated by lake trout.
		Kokanee salmon	Hatchery	Put-Grow-Take	Manage harvest and stocking levels to enhance numbers and sizes. (Spar Lake).
Savage Lake	71 Acres	Largemouth bass	Hatchery/Wild	Put-Grow-Take	Maintain current angling opportunity and harvest level. Through regulation, enhance opportunity for trophy sizes. Identify if continued stocking is warranted.
		Yellow perch	Wild	Quality	Maintain current angling opportunity and harvest level. Monitor population structure to determine if quality perch population can be sustained.
Grouse Lake	10 Acres	Westslope cutthroat trout	Hatchery	Put-Grow-Take	Maintain current angling opportunity and harvest level
Kilbrennan Lake	55 Acres	Redband trout	Hatchery/ Wild	Put-Grow-Take	Maintain current angling opportunity and harvest level. Determine stocking rates to best promote return to creel in a lake dominated by brook trout.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Brook trout	Wild	General	If practical, maintain current angling opportunity and harvest level. If feasible, reduce numbers to improve size and benefit the Put-Grow-Take and wild redband population.
Alvord Lake	53 Acres	Largemouth bass	Wild	Quality	Maintain current angling opportunity and harvest level. Through regulation, enhance opportunity for trophy sizes.
		Yellow perch	Wild	General	Maintain current angling opportunity and harvest level. Monitor population structure as part of effort to sustain perch population
Hoskins Lake Vinal Lake	35 acres 16 acres	Westslope cutthroat trout (N)	Wild	Put-Grow-Take	Maintain current angling opportunity and harvest level.
Northwest Peaks Lakes Upper Hawkins Burke Lower Hawkins Davis	 14 acres 14 acres 7 acres 5 acres	Westslope cutthroat trout (N)	Hatchery/ Wild	Put-Grow-Take/ General/Conservation	Maintain current angling opportunity and harvest level for high mountain lakes. Where practical enhance populations to meet native species goals. Where feasible, protect non-introgressed populations and restore genetic integrity to introgressed populations. Adjust/eliminate stocking in lakes with adequate natural reproduction.
		Brook trout	Wild	Suppression	Where practical, maintain current angling opportunity and harvest level. Where feasible reduce/eliminate competing populations to meet native species goals.
Fish Lakes South North Middle	 16 acres 9 acres 3 acres	Westslope cutthroat trout (N)	Hatchery/ Wild	Put-Grow-Take/ General/Conservation	Maintain current angling opportunity and harvest level for mountain lakes. Where practical enhance populations to meet native species goals. Where feasible, protect non-

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					introgressed populations and restore genetic integrity to introgressed populations. Adjust/eliminate stocking in lakes with adequate natural reproduction.


South Fork Flathead River Drainage
Middle Fork Flathead River
Hungry Horse Reservoir
Bigfork
Swan Lake
Flathead Lake
Spotted Bear River
Bunker Creek
Goat Creek
White River
Sunburst Lake
Polson
Cedar Creek
Lion Creek
Little Salmon Creek
Swan River
Big Salmon Lake
Big Salmon Creek
Sun River
Condon
Elk Creek
Holland Creek
Gordon Creek
Danaher Creek
George Lake
Youngs Creek
0 2 4
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

SOUTH FORK FLATHEAD RIVER DRAINAGE

PHYSICAL DESCRIPTION

The South Fork Flathead River drainage includes Hungry Horse Reservoir, the South Fork Flathead River and its tributaries. The South Fork originates from the Bob Marshall Wilderness, at the confluence of Young's Creek and Danaher Creek. From its headwaters, the river flows north for approximately 60 miles through the Bob Marshall Wilderness before entering Hungry Horse Reservoir. Hungry Horse Dam, created in 1953, lies approximately 5.3 miles upstream of the confluence of the South Fork and the main stem of the Flathead River. At 564 feet, Hungry Horse was the third largest and second tallest concrete dam in the world at the time of completion. The dam is managed for hydroelectric production as well as for flood control. The South Fork Flathead watershed includes some of the most pristine forested landscape in the western United States. The majority of the land base in the South Fork drainage is publicly owned, with land management responsibilities belonging to the Flathead National Forest. The vast majority of this National Forest land is protected as wilderness, though there are roaded parcels around Hungry Horse Reservoir.

There are 62 natural lakes in the drainage, totaling 2,308 surface acres. The South Fork drainage is bordered by the Swan Mountains to the west and the Flathead Range to the east. The natural lakes present in the South Fork drainage are typically mountain lakes in the headwaters of many South Fork tributaries. The largest natural lake is Big Salmon Lake (972 acres). Few lower elevation lakes exist, with Handkerchief Lake (51 acres) being one of the larger, more popular destinations.

FISHERIES MANAGEMENT

The South Fork Flathead River drainage provides one of the most unique fisheries in Montana. Construction of Hungry Horse Dam left almost the entire South Fork isolated from the remainder of the Flathead system. Because of this isolation, the South Fork provides for an entirely native fish assemblage, with outstanding fisheries for westslope cutthroat and bull trout. The South Fork represents the largest connected population of migratory, genetically unaltered westslope cutthroat trout left in the United States. Anglers in the South Fork will find exceptional catch rates for large cutthroat in an area that provides solitude and scenery that make Montana the last best place. In addition to westslope cutthroat, anglers visiting Hungry Horse Reservoir and the upstream South Fork also have the unique opportunity to target bull trout, a species listed as threatened under the Endangered Species Act. While most waters were closed to fishing for bull trout after the listing in 1998, the South Fork drainage was reopened under a permit from the USFWS in 2004. The conditions of this permit allowed for catch and release fishing for bull trout in the South Fork Flathead River and angler harvest of two bull trout per year in Hungry Horse Reservoir. The bull trout population in Hungry Horse and the connected South Fork is typical of most adfluvial populations and anglers have the chance at targeting bull trout up to 15 pounds.

The South Fork drainage is managed as a wild, native trout fishery, emphasizing natural reproduction. The basin is also the focus of native fish recovery efforts. The South Fork drainage is home to many native fish species including bull trout, westslope cutthroat trout, mountain whitefish, pygmy whitefish, northern pikeminnow, longnose and largescale sucker, and sculpin. The only non-native fish species present in the South Fork is Arctic grayling, although this species is limited to Handkerchief Lake, which once held the state record for angler-caught grayling. Regulations in the wilderness portion of the South Fork protect against overharvest and maintain a viable recreational angling experience while allowing the adventurous anglers to enjoy a camp meal of freshly caught trout. Guided float trips exist on the South Fork, though outfitting is regulated through a permit system administered by the USFS. The remote nature of the upper South Fork largely limits the number of anglers utilizing the river. However, anecdotal evidence suggests that angler use may be increasing and future surveys may determine the need for additional regulation.

The fishery downstream of Hungry Horse Dam provides for a limited tailwater section, though access is difficult due to steep banks and swift current. This section of river is dominated by native fish species, though rainbow and lake trout have been observed in this location. Historically, water exiting Hungry Horse Dam was released from the bottom of the reservoir, altering the stream temperature for the rest of the Flathead River downstream of the confluence with the South Fork. However, in 1995 a selective withdrawal system was installed and has since provided a more natural temperature regime. In recent years the occurrence of the diatom algae *Didymosphenia geminata* appears to have increased below Hungry Horse Dam. Scientists are currently investigating the potential impacts of the increase in diatom density.

High mountain lakes in the South Fork were historically stocked with cutthroat trout. However, modern genetic analysis has revealed that many of these cutthroat trout plants in the early part of the 20th century had genetic material other than westslope cutthroat trout. Since the 1980's any lakes stocked have been with genetically pure westslope cutthroat from the Washoe Park State Fish Hatchery. In 2007, FWP implemented a watershed-wide restoration project aimed at removing these headwater sources of non-native genes and therefore protecting the important population of the South Fork.

HABITAT

The South Fork Flathead River drainage contains some of the most pristine forest land in the lower 48 States. Much of the watershed is located within the Bob Marshall Wilderness. When combined with the neighboring Scapegoat and Great Bear Wilderness areas, the Bob Marshall Wilderness Complex is the second largest wilderness-protected land area in the lower 48 with over 1.5 million acres. Because of this level of protection, fisheries habitat remains largely in the same condition as it was prior to human civilization. Migratory fish populations thrive in connected stream networks with little man-made disturbance.

Downstream of the wilderness boundary the drainage is still largely publicly owned, with the USFS responsible for land management. As is the case with many managed forests, years of timber harvest have left a legacy of roads upon the landscape. However, while historic logging practices may have negatively impacted streams and their associated fisheries, modern forestry

Best Management Practices and conservation efforts have greatly improved fisheries habitat from its previous condition. Fish passage has been provided at road crossings on either side of Hungry Horse Reservoir, maintaining connection to spawning and rearing habitat for fish inhabiting the reservoir. Funding for this restoration work has come from both BPA mitigation as well as USFS funding sources.

FISHING ACCESS

Although there are abundant recreational fishing opportunities in the South Fork drainage, FWP has no official fishing access points. Access points along both the South Fork Flathead River and Hungry Horse Reservoir are managed by the USFS. These sites include a combination of primitive boat launches and dispersed camping as well as developed campgrounds and boat ramps designed to handle considerable traffic.

Special Management Issues

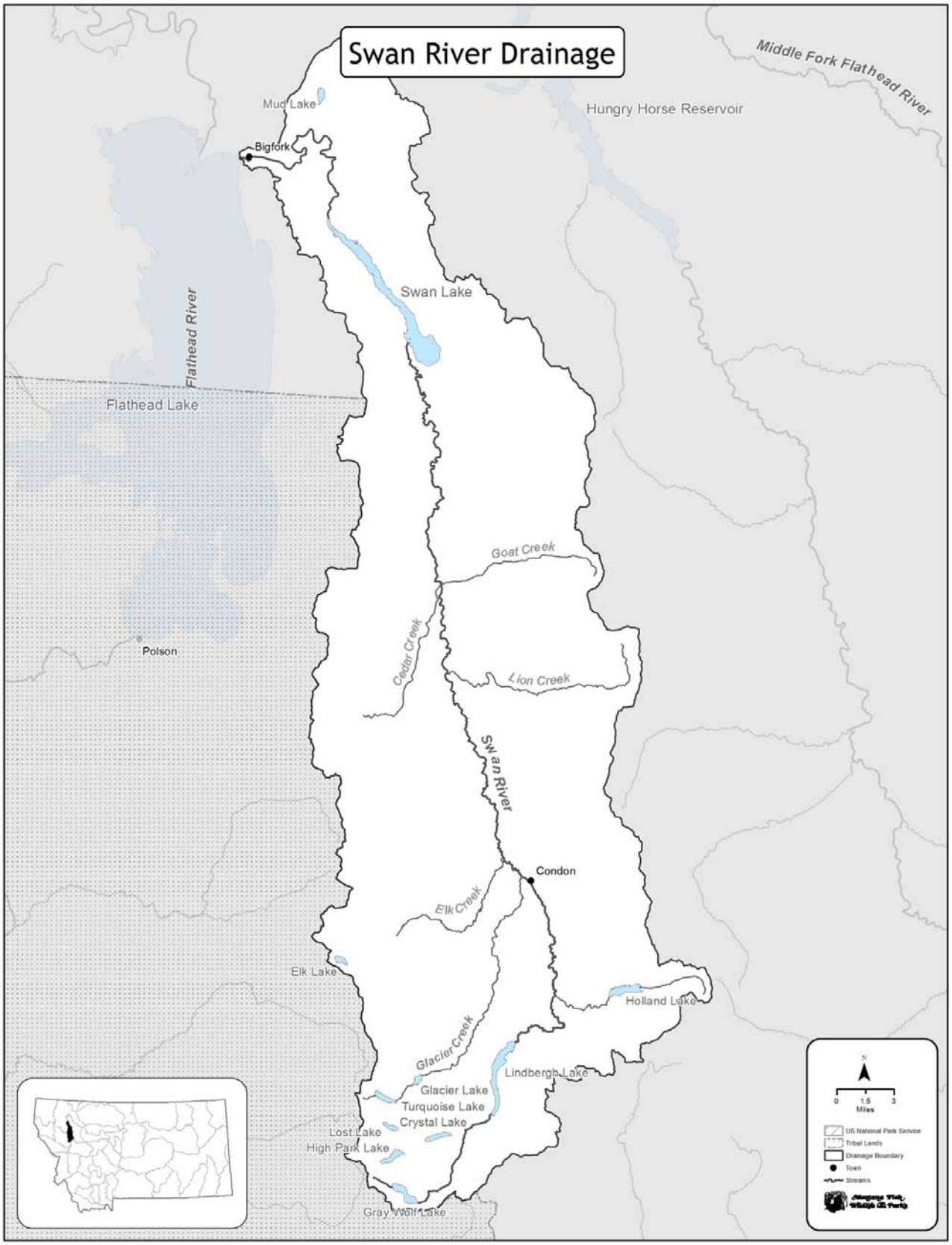
South Fork Flathead Drainage Westslope Cutthroat Trout Conservation Program

The South Fork Flathead River drainage comprises more than half of the remaining interconnected habitat for westslope cutthroat trout within this species' historic range. However, long-term persistence of this native species is threatened by hybridization with introduced rainbow trout and Yellowstone cutthroat trout that were stocked decades ago in many historically fishless headwater lakes in the South Fork drainage. In an effort to minimize the spread of hybridization, Montana Fish, Wildlife, and Parks developed the South Fork Flathead Drainage Westslope Cutthroat Trout Conservation Program. The objective of this multi-year project is to remove sources of nonnative trout in 21 lakes and reestablish these fisheries with pure westslope cutthroat trout. To date, rotenone has successfully been used to chemically remove introduced trout in ten lakes and genetic swamping is being used in an additional six lakes as an alternative technique to restoring westslope cutthroat trout. Additional efforts in the South Fork Flathead include the development and use of local broodstocks to conserve genetic variation in this native species.

FISHERIES MANAGEMENT DIRECTION FOR SOUTH FORK FLATHEAD RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
South Fork Flathead River and Tributaries (Headwaters Downstream to the Wilderness Boundary)	40 Miles	Bull trout (N)	Wild	Conservation/ Restrictive Regulations	Manage for catch-and-release angling through a catch-card permit system.
		Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Maintain numbers and quality of the fishery. Provide a limited harvest fishery allowing anglers to keep small fish for camp fare while maintaining large fish and spawning fish. Eliminate threats to genetic purity. Monitor westslope cutthroat trout for increases in hook scar rates and catch rates related to increases in angler use.
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
South Fork Flathead River and Tributaries (Wilderness Boundary to Hungry Horse Reservoir)	20 Miles	Bull trout (N)	Wild	Conservation/ Restrictive Regulations	Manage for catch-and-release angling through a catch-card permit system.
		Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Provide a limited harvest fishery. Conduct population estimates as part of evaluation of the effectiveness of the short catch-and-release section. Eliminate threats to genetic purity.
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
Spotted Bear Lake	12 Acres	Westslope cutthroat trout	Wild/ Hatchery	Put-Grow-Take	Provide for harvest and recreational opportunity. Continue to monitor for stocking evaluation. Plants appear to have poor success in recent years.
Hungry Horse Reservoir	23,577 Acres	Bull trout (N)	Wild	Conservation/ Restrictive Regulations	Regulate harvest and monitor migratory populations for conservation and angling

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					through a catch card system.
		Westslope cutthroat trout (N)	Wild	Conservation	Provide recreational angling opportunity. Eliminate threats to genetic purity
		Mountain whitefish (N)	Wild	General	Provide recreational angling opportunity
Habitat needs and activities: Improve habitat to reduce disturbance, minimize future threats, and provide ecosystem function.					
Handkerchief Lake	51 acres	Westslope cutthroat trout (N)	Wild	Conservation	Provide recreational angling opportunity. Eliminate threats to genetic purity
		Arctic grayling	Wild	General	Provide for harvest and recreational opportunity.
Habitat needs and activities: Lake is scheduled for rotenone treatment as part of the South Fork Flathead Westslope Cutthroat Conservation project. Grayling and pure westslope cutthroat will be re-stocked after treatment.					
South Fork Flathead River Drainage - Mountain Lakes	60 lakes 2,245 acres	Westslope cutthroat trout (N)	Wild/ Hatchery	Conservation/ Put-Grow-Take	Eliminate sources of non-native trout in 21 lakes to protect genetic purity of westslope cutthroat in the drainage. Provide recreational fishing opportunity for a variety of fish sizes and catch rates. Manage with a basic stocking rate of 100 westslope cutthroat fingerlings per acre every 3 years. Adjust number and frequency of plants based on extent of natural reproduction, fishing pressure and creating different fishing opportunities. Coordinate with wilderness management when necessary.


Swan River Drainage
Middle Fork Flathead River
Hungry Horse Reservoir
Mud Lake
Bigfork
Swan Lake
Flathead River
Flathead Lake
Goat Creek
Cedar Creek
Polson
Lion Creek
Swan River
Condon
Elk Creek
Elk Lake
Holland Lake
Glacier Creek
Lindbergh Lake
Glacier Lake
Turquoise Lake
Crystal Lake
Lost Lake
High Park Lake
Gray Wolf Lake
N
0 1.5 3
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

SWAN RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Swan River drainage includes the Swan River and its tributaries, and major lakes such as Swan Lake, Holland Lake, and Lindbergh Lake and numerous smaller lakes. The Swan River originates from the Mission Mountain Wilderness, flowing out of Gray Wolf Lake, then continuing through Lindbergh Lake. From its headwaters, the river flows north for 52 miles through Missoula and Lake Counties before entering Swan Lake. The Swan River then continues north and west into Flathead County and through Bigfork Dam, a 4.1 megawatt hydroelectric facility constructed in 1902, before entering Flathead Lake. The lowest mile of the Swan River flows through a high gradient canyon (Wild Mile) that is popular among whitewater enthusiasts. The Swan watershed includes dramatic mountain peaks in the headwaters and heavily forested slopes and wetlands on the valley floor. Much of the land base in the Swan drainage is publicly owned, with large parcels being managed by both the Flathead National Forest and the Swan River State Forest.

There are 72 natural lakes in the drainage totaling 7,125 acres. The Swan drainage is bordered by the Mission Mountains (and Mission Mountain Wilderness) to the west and the Swan Mountains to the east. Most natural lakes are mountain lakes in the headwaters of many Swan drainage tributaries on both the east and west sides of the watershed. The largest lake is Swan Lake (3,269 acres). Lindbergh Lake (815 acres) and Holland Lake (414 acres) are the other two large, valley bottom lakes and are located in the upstream end of the drainage. Several other valley bottom lakes exist (Van, Peck, Shay, Russ, and Fran Lakes) and are popular for recreation and angling opportunities.

FISHERIES MANAGEMENT

The Swan River drainage provides diverse fisheries opportunities typical of the northwest portion of Montana. While many opportunities exist for anglers to fish outstanding multi-species water bodies, the Swan is also home to one of Montana's last strongholds for bull trout, a species listed as threatened under the Endangered Species Act. The Swan drainage is a perfect example of FWP's dual mission of providing recreational fishing opportunity while conserving our valuable native fish resources.

The Swan River is managed as a wild trout fishery, emphasizing natural reproduction. The basin is also the focus of native fish recovery efforts. The Swan River drainage is home to many native fish species including bull trout, westslope cutthroat trout, mountain whitefish, pygmy whitefish, northern pikeminnow, peamouth, longnose and largescale sucker, and sculpin. Several introduced fish species also inhabit the Swan drainage including brook trout, rainbow trout, lake trout, northern pike, kokanee salmon, brook stickleback, central mudminnow, and yellow perch. The fishery of the Swan River itself is largely focused on rainbow and westslope cutthroat trout. Regulations for these two trout species protect against overharvest and maintain a viable recreational angling experience. Brook trout are also present in the upper Swan River and make up a portion of the catch when fishing the river. Guided float trips exist on the Swan River, though outfitting is regulated through a permit system administered by the DNRC and the USFS.

Though the Swan River was once a stronghold for bull trout, intentional angling is not allowed in the river upstream of Swan Lake.

The fishery downstream of Swan Lake is considerably different from the upper river. Warm outflows from Swan Lake limit trout production; though a quality rainbow trout fishery exists during spring months. Prior to entering Flathead Lake, the Swan River is impounded by Bigfork Dam. Trout habitat in the portion of river influenced by this impoundment is minimal, and the fishery is dominated by northern pike. Below Bigfork Dam, the Swan River's gradient increases dramatically and provides recreational opportunity for whitewater enthusiasts. A limited fishery for rainbow and lake trout exists in this reach, though access and wading conditions are difficult.

The Swan drainage is home to some of the most robust populations of bull trout in Montana. Adfluvial bull trout populations exist in Swan Lake, Lindbergh Lake, and Holland Lake. The bull trout population in Swan Lake has historically been so strong that when the species was listed as threatened under the Endangered Species Act in 1998, it remained the only water body in Montana where anglers could fish for, and keep, bull trout. Angling for bull trout is still permissible, however beginning in 2012, anglers are required to release all bull trout caught in Swan Lake. Intentionally targeting bull trout in Lindbergh Lake, Holland Lake, and the Swan River and its tributaries is not allowed. Spawning tributaries Elk, Goat Lion and Squeezer creeks are closed on a year round basis to prevent disturbance of bull trout and unintentional harvest of juvenile bull trout by anglers who mistake them for brook trout.

The Swan drainage contains several valley-bottom lakes that provide quality recreational fishing opportunities. Van, Shay, Fran, and Peck Lakes are all stocked with rainbow trout and provide anglers with put-and-grow fisheries with scenic value and relative solitude, as defined boat ramps do not exist. Although not directly connected to the Swan River, Loon, Horseshoe, and Echo Lakes also contain recreational fisheries for species such as largemouth bass, smallmouth bass, lake whitefish, and kokanee.

High mountain lakes are predominantly stocked with westslope cutthroat trout, except Heart Lake and Island Lake which are periodically stocked with golden trout. Many of the mountain lakes in the Swan drainage are located in high elevation, alpine settings within the Mission Mountain Wilderness or Swan Mountains. Because of the remote nature of these lakes, many are intentionally left fishless, many are not stocked currently, and some were never stocked officially but may have been stocked by sportsmen . Stocking records for the lakes previously planted with fish reveal that undesignated cutthroat, which may have been hybridized with rainbow or Yellowstone cutthroat trout, were planted prior to the development of a pure westslope cutthroat brood. Therefore, some lakes may still contain hybridized populations of cutthroat trout, regardless of modern stocking plans. Lakes are stocked at a basic rate of 100 westslope cutthroat per acre every 3 years. Stocking density and frequency are adjusted relative to natural reproduction, if any, and fishing pressure. Management is coordinated with wilderness management if needed.

HABITAT

The Swan River valley was historically and continues to be very much a working forest. Much of the land ownership is a combination of private timber land, national forest, and Montana school trust lands. As is the case with many managed forests, years of timber harvest have left a legacy

of roads upon the landscape. However, while historic logging practices may have negatively impacted streams and their associated fisheries, the Swan valley is fortunate to be at the forefront of progressive land management approaches. In 2000, Plum Creek Timber Company released its Native Fish Habitat Conservation Plan (HCP). This plan allowed for an adaptive management approach to continue to actively manage forest lands, while providing protective measures for threatened fish species such as bull trout. Since then, the DNRC has released its own habitat conservation plan providing for many of the same conservation measures included in the effort done by Plum Creek. In addition to these plans, FWP has purchased conservation easements in many bull trout spawning streams. These easements protect the riparian vegetation necessary for bull trout spawning and rearing habitat.

In recent years, land acquisitions in the Swan drainage have been designed to protect both terrestrial and aquatic species. Important bull and westslope cutthroat trout habitat are on these lands. Land parcels that were previously checker-boarded with national forest lands have been purchased by the USFS. Similarly, former Plum Creek lands in the Swan State Forest are currently held by The Nature Conservancy, with plans to transfer ownership to the State of Montana. Additionally FWP has purchased several large conservation easements in bull trout core areas and has placed restrictions on land management to benefit bull and westslope cutthroat trout.

FISHING ACCESS

Although there are abundant recreational fishing opportunities in the Swan valley, FWP has very few official fishing access points. Access points provided by FWP include one on the lower Swan River, downstream of Swan Lake, and one on Bigfork Bay where the Swan River enters Flathead Lake. All of the other public access points in the Swan are provided by either the DNRC or the USFS. These sites include a combination of primitive boat launches and dispersed camping as well as developed campgrounds and boat ramps designed to handle considerable traffic.

The USFS provides the only public access point on Swan Lake. The site contains a day-use area, boat ramp, campground, and public swimming area. Because the site is the only public access point, it has been used by FWP for several angler surveys. Additionally, FWP maintains an InfoMax recording system at the site which broadcasts information regarding native species management, angling opportunities, and way to minimize the risk of spreading Aquatic Invasive Species (AIS).

SPECIAL MANAGEMENT ISSUES

Experimental removal of lake trout in Swan Lake

The Swan Valley has historically been home to a stable bull trout population. However, in 1998 anglers began to occasionally catch adult-sized (20-30 inch) lake trout from Swan Lake and the Swan River. This caused alarm because lake trout are not native and are notorious for rapidly expanding and dominating fish communities in lakes with *Mysis* shrimp such as Swan Lake, at the expense of bull trout and kokanee salmon. In 2003, the level of concern was compounded when biologists gillnetted juvenile lake trout from Swan Lake during standard low-intensity sampling efforts, indicating that wild reproduction was occurring. Since 2003, lake trout catch by

anglers as well as during FWP's biological sampling has continued to increase, indicating that the population is likely expanding. In June of 2009, FWP approved plans for a three-year experimental removal of lake trout in Swan Lake. The project was initiated as a feasibility study to determine if targeted gillnetting can be an effective way to reduce lake trout numbers while minimizing bycatch of other fish species. From 2009-2011 over 21,000 lake trout were removed from Swan Lake. Lake trout mortality rates appear to be high relative to other lake trout suppression projects. Additionally, lake trout catch per unit effort during netting activities decreased from 2010 to 2011, indicating that netting efforts were effective at reducing year-to-year cohort strength. Inadvertent bycatch of other fish species was relatively low, although concerns regarding bycatch of bull trout still exist. While much has been learned with regard to our ability to affect lake trout cohort strength from one year to the next, the overall effect this level of removal has on the lake trout population and subsequent benefits to other fish species remain unknown. Therefore, in May 2012 FWP released another Environmental Assessment for a five-year continuation of this removal experiment. This period of time was chosen because it represents the shortest amount of time necessary to fully assess and realize the effects of previous removal efforts. Information obtained from the proposed action will help to determine feasibility and effectiveness of alternatives for managing the lake trout population (e.g., suppression of the population).

FISHERIES MANAGEMENT DIRECTION FOR SWAN RIVER DRAINAGE

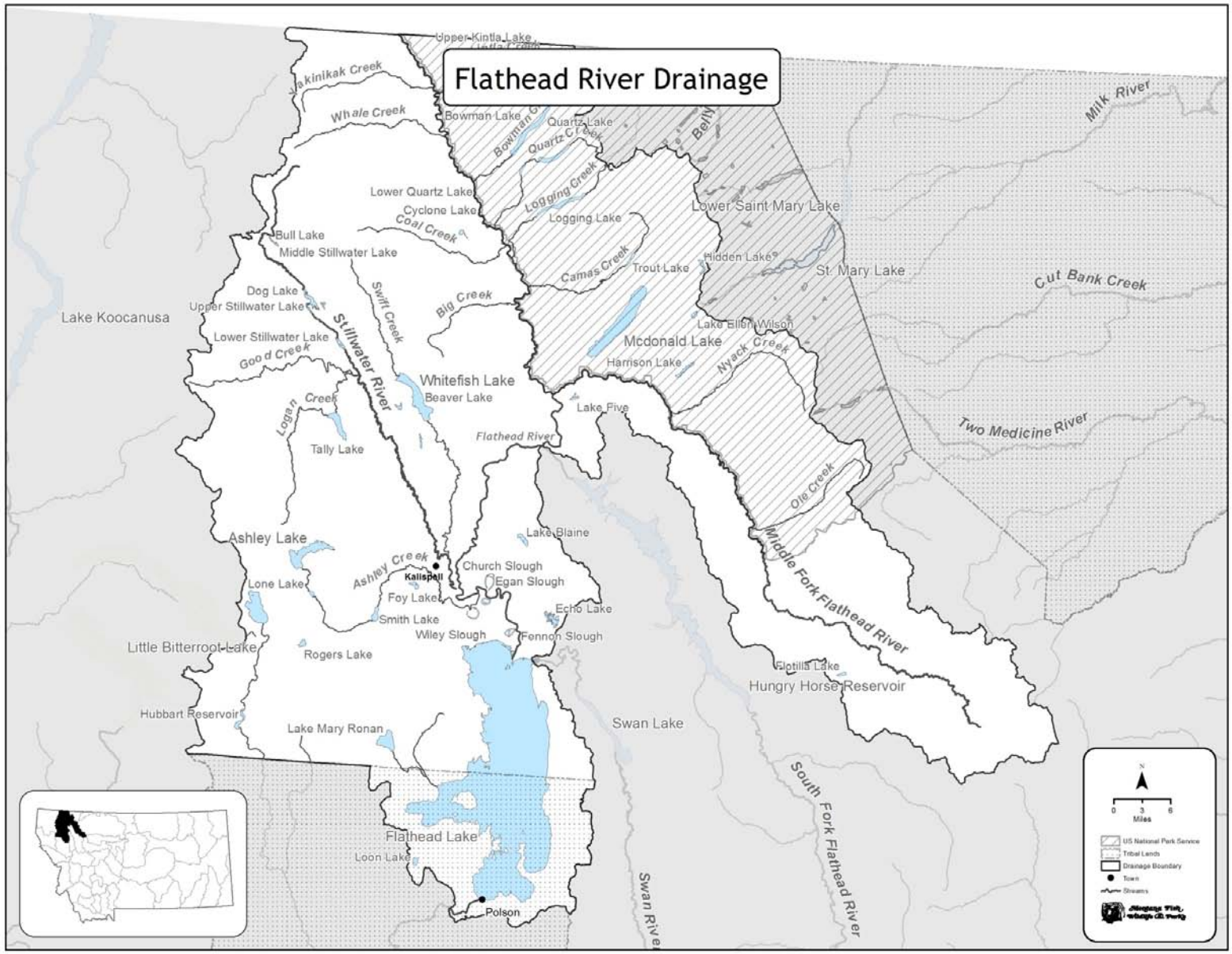
Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Swan River and Tributaries (Headwaters Downstream to Swan Lake)	52 Miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout and minimize incidental catch of bull trout. Maintain spawning tributary mouth closures as needed.
		Westslope cutthroat trout (N)	Wild	Conservation/Restrictive Regulations/General	Eliminate harvest and enhance fluvial populations for conservation and WCT angling. Consider isolation of WCT populations if hybridization is a threat and habitat is sufficient to allow persistence.
		Rainbow trout	Wild	General/Restrictive Regulations	Minimize harvest to provide for a quality fishery in one section. Maintain numbers to allow harvest in some sections.
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
		Brook trout	Wild	General	Allow for harvest in tributaries that do not contain bull trout.
Habitat needs and activities: Stream crossing upgrades and road BMP's for most forest lands. Enhance habitat to favor native trout and whitefish.					
Lindbergh Lake	815 Acres	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout and minimize incidental catch of bull trout. Enhance migratory populations for conservation.
		Westslope cutthroat trout (N)	Hatchery	Put- Take	Evaluate stocking to determine success to creel. Provide recreational angling opportunity.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Kokanee	Hatchery	Put-Grow-Take	Provide for harvest and recreational opportunity
		Lake trout	Wild	Suppression	Reduce numbers to benefit native fish and recreationally important kokanee. Increase monitoring and evaluate potential tools to reduce lake trout abundance to benefit native and recreationally important fish species.
Holland Lake	414 Acres	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout and minimize incidental catch of bull trout. Enhance migratory populations for conservation.
		Westslope cutthroat trout (N)	Hatchery	Put- Take	Evaluate stocking to determine return to creel. Provide recreational angling opportunity.
		Kokanee	Hatchery	Put-Grow-Take	Provide for harvest and recreational opportunity.
		Yellow perch	Wild	General	Provide for harvest and recreational opportunity.
		Lake trout	Wild	Suppression	Assess status to determine need for management and potential impacts on fishery
Habitat needs and activities: Maintain open channel at inlet to allow access for spawning bull trout.					

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Swan Lake	3,269 Acres	Bull trout (N)	Wild	Conservation/ Restrictive Regulations	Catch and release fishing allowed but not harvest. Enhance migratory populations for conservation.
		Rainbow trout, Westslope cutthroat trout (N)	Wild	General	Provide recreational angling opportunity for occasional fish.
		Kokanee, Northern pike, Yellow perch	Wild	General	Provide for harvest and recreational opportunity.
		Lake trout	Wild	Suppression	Continue to evaluate tools to effectively reduce numbers to benefit native fish and recreationally important kokanee.
Swan River and Tributaries (Swan Lake to Flathead Lake)	12 Miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout and minimize incidental catch of bull trout.
		Westslope cutthroat trout (N)	Wild	Conservation/Restrictive Regulations	Eliminate harvest and enhance fluvial populations for conservation and WCT angling. Consider isolation of WCT populations if hybridization is a threat and habitat is sufficient to allow persistence.
		Rainbow trout	Wild	General	Manage trout harvest to support recreational fishing and minimize impacts on native fish.
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
		Northern pike	Wild	General	Provide opportunity for harvest and recreational angling.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Habitat needs and activities: Improve habitat to support ecosystem function and production of trout and whitefish. Salvage/rescue fish entrained in Bigfork Dam canal during canal maintenance dewatering.					
Echo Lake	695 Acres	Largemouth bass	Wild/Hatchery	Put-Grow-Take/ Quality/ Restrictive Regulations	Provide for a quality recreational fishery for at least 1 bass >12" at a rate of 0.25 fish per hour . Maintain 1> 12" limit to maintain larger bass and protect spawners. Assess contribution of hatchery plants.
		Rainbow trout	Hatchery	Put-Grow-Take	Provide recreational angling opportunity. Assess return of stocked trout
		Kokanee	Hatchery	Put-Grow-Take	Provide for harvest and recreational opportunity for 12" salmon.
		Northern pike,	Wild	General	Provide recreational angling opportunity.
		Lake whitefish, Yellow perch	Wild	General	Provide recreational angling opportunity.
Habitat needs and activities: Lakeshore flooding in 2011 prompted the closing of Echo Lake to wake producing boat speeds. The lake again flooded in 2012. Weekly lake elevation surveys now occur during summer to better inform managers of potential future flood events.					
Loon Lake	45 Acres	Largemouth bass	Wild/Hatchery	General	Provide for a recreational fishery. Assess contribution of hatchery plants. Continue to monitor largemouth bass nest counts.
		Rainbow trout	Hatchery	Put- Take/ Quality	Provide for a large (>18") rainbow trout fishery and recreational angling opportunity
		Yellow perch	Wild	General	Provide recreational angling opportunity
Horseshoe Lake	41 Acres	Smallmouth bass Pumpkinseed	Wild/Hatchery Wild	Special Regulations General	Provide recreational angling opportunity. Assess contribution of hatchery fish. Install

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					habitat structures to improve spawning and survival.
		Yellow perch	Transfer	Suppression	Yellow perch were first observed in Horseshoe Lake in 2011 as the result of an illegal plant. FWP monitoring confirmed presence and reproduction in May 2012. Eliminate harvest and suppress as possible to remove incentive to move to other waters.


Flathead River Drainage
Upper Kintla Lake
Kakinikak Creek
Whale Creek
Bowman Lake
Quartz Lake
Lower Quartz Lake
Cyclone Lake
Coal Creek
Bull Lake
Middle Stillwater Lake
Dog Lake
Upper Stillwater Lake
Lower Stillwater Lake
Good Creek
Stillwater River
Swift Creek
Big Creek
Lake Koocanusa
Logging Creek
Logging Lake
Camas Creek
Trout Lake
Lower Saint Mary Lake
Hidden Lake
St. Mary Lake
Milk River
Cut Bank Creek
Lake Ellen Wilson
Mcdonald Lake
Harrison Lake
Nyack Creek
Whitefish Lake
Beaver Lake
Logan Creek
Tally Lake
Flathead River
Lake Five
Two Medicine River
Ole Creek
Middle Fork Flathead River
Ashley Lake
Ashley Creek
Kalispell
Lake Blaine
Church Slough
Egan Slough
Lone Lake
Foy Lake
Smith Lake
Wiley Slough
Echo Lake
Fennon Slough
Little Bitterroot Lake
Rogers Lake
Flotilla Lake
Hungry Horse Reservoir
Hubbart Reservoir
Lake Mary Ronan
Swan Lake
South Fork Flathead River
Flathead Lake
Loon Lake
Polson
Swan River
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

FLATHEAD RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Flathead River drainage includes Flathead Lake, the Flathead River and its tributaries, including the North Fork and Middle Fork of the Flathead River (the South Fork of the Flathead is not included in this management area), the Whitefish River drainage, the Stillwater River drainage and the numerous small drainages on the westside of the Flathead Valley, draining over 7,000 square miles. The North Fork of the Flathead River begins in British Columbia, Canada and the Middle Fork in the Great Bear and Bob Marshall Wilderness areas of the Flathead National Forest. Glacier National Park lies between the two forks. Flathead Lake is bisected by the northern boundary of the Flathead Indian Reservation of the Confederated Salish and Kootenai Tribes. This management area is located in Flathead and Lake Counties. The Flathead watershed includes 10,000-foot peaks in the headwaters and heavily forested slopes, agricultural lands and wetlands on the valley floor.

There are 183 lakes in the drainage, totaling 156,966 surface acres. Numerous large lakes exit in the drainage, including Flathead Lake, Whitefish Lake, Upper and Lower Stillwater Lakes, Tally Lake, Ashley Lake, Little Bitterroot Lake, Hubbart Reservoir, Lake Mary Ronan, Lake Blaine, Echo Lake and many small valley and mountain lakes of less than 350 surface acres. There are three general types of lake settings that provide a wide diversity of fishing opportunity. There are high elevation alpine lakes that are ice free for less than half of the year that provide summer trout fishing. There are moderate elevation mountain setting lakes that are accessible most of the year providing a mix of fish species and opportunity. And there are valley floor lakes that are very accessible and provide opportunity for both warm and cold water fish species.

FISHERIES MANAGEMENT

Flathead Lake is the most popular fishery in the drainage and one of the top ten water bodies for fishing effort in Montana. Flathead Lake is large at about 123,000 surface acres. The lake's outstanding natural resources and diversity of recreational opportunities, combined with its proximity to Kalispell, Polson and Missoula, contribute to its popularity. It is a destination vacation site for Canadian and other out-of-state visitors.

Flathead Lake and river are managed as a wild trout fishery, emphasizing natural reproduction and native fish. Fishing regulations across the drainage are very restrictive for native species and very liberal for harvest of non-native fish species. The basin is also the focus of native fish recovery efforts. Flathead Lake is home to eleven native fish species including bull trout, westslope cutthroat trout, mountain and pygmy whitefish, northern pike minnow, peamouth, longnose and largescale sucker, redside shiner, and two species of sculpin. Twelve non-native fish species inhabit the Flathead including lake trout, lake whitefish, brook trout, rainbow trout, northern pike, brook stickleback, black bullhead, largemouth and smallmouth bass, crappie and yellow perch. Dominant fish species vary from westslope cutthroat, bull trout and brook trout in the headwaters, to a mixture of warm and cold water species at lower elevations. Angling on Flathead Lake occurs year-round and is most popular in the early spring, summer and fall. Lake

trout, lake whitefish and yellow perch comprise the majority of the catch. Winter ice fishing occurs annually on bays as ice allows.

The Flathead River is the most popular stream fishery in the drainage. The mainstem reach on the valley floor upstream of the lake is the most popular section providing summer fishing for westslope cutthroat trout and a fall run of lake whitefish. The connected sloughs near Flathead Lake provide a mixed fishery primarily for warm water species. The North and Middle forks of the Flathead River provide diverse recreational activities and popular westslope cutthroat trout fishing.

Bull trout exhibit two life forms, with adults residing in a lake (adfluvial) or river (fluvial) and spawning in upstream tributaries. Juveniles rear in the tributaries for one to three years before migrating to adult habitats downstream. Fish move freely throughout the entire Flathead system, including all major river tributaries and lakes. The one exception is Hungry Horse Dam which cut off about 40% of the Flathead drainage. The dam prevents Flathead Lake bull trout from migrating into the South Fork of the Flathead River; Hungry Horse Reservoir now takes the place of Flathead Lake for that part of the population's life cycle. The North and Middle forks provide spawning and rearing habitat for the Flathead Lake and River population. There are other bull trout populations in other lakes and tributary systems including Whitefish Lake, Upper Stillwater Lake, Cyclone and Frozen Lakes, and lakes in Glacier National Park. Fishing regulations are very restrictive for bull trout in the Flathead drainage, where fishing for bull trout is not allowed. Major spawning tributaries (Big, Coal, Whale, Trail, Granite, Lodgepole, Morrison, and Long creeks) are closed all year to fishing. In addition, special fishing restrictions (stream mouth closures) exist on some spawning streams to protect spawning bull trout.

The larger lakes in the area contain valuable mixed non-native recreational fisheries. Ashley Lake, Little Bitterroot Lake and Lake Mary Ronan primarily provide popular kokanee salmon fisheries during both summer and winter months. Lake Mary Ronan is the kokanee egg source for the State hatchery stocking program. Echo Lake and Lake Blaine provide popular largemouth bass fisheries. With the exception of Lake Mary Ronan kokanee, these are wild self-sustaining fish populations.

Numerous small mid-elevation lakes are stocked with westslope cutthroat trout, rainbow trout or Arctic grayling providing popular put-and-grow fisheries. Lakes are stocked on a one to four year rotation to maximize fish growth or catch rates. Four family fishing ponds in the valley are heavily stocked with catchable size trout and provide many thousands of days of angling. High mountain lakes are stocked with westslope cutthroat trout.

HABITAT

Water quality is very important to Flathead Valley residents. At this time, water quality in the Flathead Lake and river system is very good, providing for drinking and municipal uses, swimming and recreation, growth and propagation of fish and associated aquatic life, and as an agricultural and industrial water supply. FWP works to protect high water quality in many ways. FWP provides input to the permitting process for a number of stream protection laws (SPA, 310) in an effort to minimize impacts and water degradation associated with human development. Biologists administer over a hundred such permits a year in the Flathead drainage.

In the North Fork of the Flathead River drainage there are a number of large coal deposits. Over the last four decades, there has been exploration of mining reserves and attempts to begin open-pit coal mining--activities that threaten water quality in the river and Flathead Lake. A recent cooperative effort between British Columbia, Montana and numerous government agencies and non-governmental groups resulted in a prohibition to mining in the North Fork of the Flathead River. This prevents future degradation of water quality and fish habitat from coal mining and other resource development.

The USFS and FWP have completed stream habitat restoration improvements in bull trout spawning and rearing habitat. For example, large trees have been added to several miles of Hallowat and Coal creeks to provide complex habitat to impacted stream reaches. These and other projects will improve bull trout and westslope cutthroat trout habitat in these streams.

Recent and ongoing land acquisitions in the Flathead drainage are designed to protect both terrestrial and aquatic species. Important bull trout and westslope cutthroat trout habitat are on these lands. FWP and partners have completed numerous private land conservation easements along the Flathead River, protecting miles of stream bank and many acres of riparian vegetation. This activity will help protect water quality in the Flathead drainage and important habitat and migratory routes for fish and wildlife.

The Bonneville Power Administration is required to mitigate for the construction and operation of Hungry Horse Dam on the South Fork of the Flathead River, and accomplishes much of this by funding the FWP mitigation program. In 1995, FWP, the Bonneville Power Administration and the BOR constructed a selective withdrawal structure on the dam. This structure pulls water from various depth levels in the reservoir to provide natural water temperatures to the Flathead River downstream. Prior to construction the dam released cold water from the bottom of the reservoir that significantly reduced stream temperatures in the Flathead River for 49 miles downstream. Restoring natural temperatures improved conditions for fish and aquatic insects. This group of agencies also implemented a dam water release strategy to more closely mimic the natural river annual flow regime. The dam is now operated to not only provide flood protection and energy production but also maintain flows in the river downstream similar to those prior to dam construction.

FISHING ACCESS

There are more than 14 publicly owned or managed access sites along the Flathead River downstream of the confluence of the North and Middle forks. There are more than 15 publicly owned or managed access sites along the North and Middle forks. There are more than 20 publicly owned or managed access sites and six privately owned access sites along Flathead Lake. Some access sites are located near local communities and, in addition to river access, provide convenient land-based recreation opportunities. Most of the river and lake access points provide boat launching opportunities, docks, bathroom facilities and parking. FWP will continue to pursue opportunities to increase access on popular water bodies, such as Flathead Lake and Whitefish Lake, where user numbers are increasing to levels above the capacity of existing sites and on water bodies where no public access currently exists such as Lake Blaine.

SPECIAL MANAGEMENT ISSUES

Flathead Lake and River Fisheries Co-Management Plan

The Confederated Salish and Kootenai Tribes (CSKT) and Montana Fish, Wildlife and Parks share fisheries management authority on Flathead Lake and River. In 2000, the two co-managers completed a fisheries management plan with goals to protect native fish by reducing non-native fish with an emphasis on sport harvest, provide recreational angling, and protect high water quality in the watershed. The management plan expired in 2010 but continues to guide management activities. CSKT is currently preparing an EIS to explore additional means to reduce lake trout abundance and increase native fish abundance. Co-managers will continue to manage fisheries and develop management plans in the future.

Westslope Cutthroat Hybridization

Pure westslope cutthroat populations within the interconnected Flathead drainage are threatened by hybridization with rainbow trout. Hybrids have shown both increased abundance and distribution in recent decades. FWP is investigating methods to prevent rainbows and hybrids from spawning, remove hybrids as feasible and to change fishing regulations to allow and even encourage anglers to harvest hybrid trout.

Illegal Fish Introductions

Illegal fish introductions are a continuing problem in Montana with more than half of the documented 600+ introductions occurring in northwest Montana. Illegal introductions impact both native and recreational fisheries, reduce fishing opportunity and increase management costs. As a disincentive to further illegal introductions, fishery managers will look to potential alternatives such as to either prohibit harvest on panfish or not provide management such as fishing limits on game fish such as pike, bass and walleye in selected waters, depending on the situation and species involved.

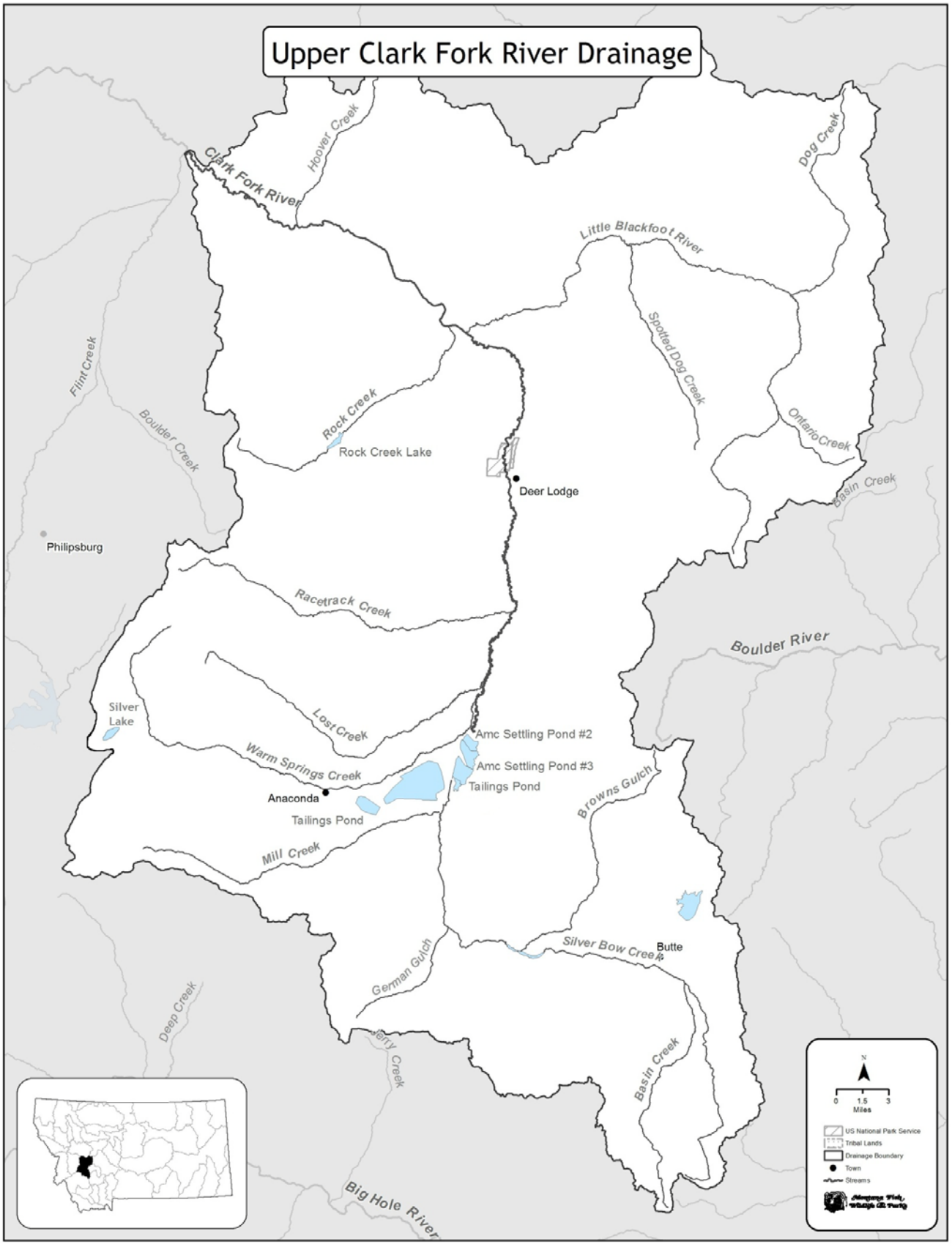
FISHERIES MANAGEMENT DIRECTION FOR FLATHEAD RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Flathead River - Headwaters downstream to confluence with Flathead Lake including the North and Middle Forks, and Sloughs	198 Miles	Bull trout (N)	Wild	Conservation	Continue yearlong angling closures for all fish on primary bull trout spawning streams and closure on angling for bull trout in the Flathead River and Forks.
		Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Eliminate harvest and maintain or expand populations for conservation and catch and release westslope cutthroat angling. Consider isolation of westslope cutthroat populations if hybridization is a threat and habitat is sufficient to allow persistence.
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
		Lake whitefish, Northern pike, Yellow perch, Lake trout, Brook trout, Rainbow trout, Black crappie	Wild	General/Suppression	Provide angling harvest opportunity to reduce numbers to help meet native species goals. Investigate removal of rainbow-cutthroat trout hybrids and rainbow trout to reduce future hybridization. Consider closing harvest on illegally introduced panfish in some waters to remove incentive for further illegal introductions.
Habitat needs and activities: Restore habitat to favor native bull trout, WCT and mountain whitefish in headwater stream reaches.					
Stillwater River, Ashley Creek and Tributaries, Whitefish River	75 miles 47 miles plus Tributaries, 23 miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout.
		Westslope cutthroat trout (N)	Wild	Conservation/General	Maintain or expand populations of westslope cutthroat trout. Consider isolation of WCT populations if hybridization is a threat and

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					habitat is sufficient to allow persistence. Provide angling opportunity including harvest for westslope cutthroat trout where possible.
		Rainbow trout, Brook trout, Northern pike	Wild	General	Maintain current levels of angling harvest
		Mountain whitefish (N)	Wild	General	Maintain numbers. Begin to understand population size and trend.
Habitat needs and activities: Continue to manage connectivity to favor native fishes.					
Whitefish Lake, Tally Lake, Upper Stillwater Lake, Lower Stillwater Lake	3,315 acres, 1,211 acres 592 acres, 252 acres	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout.
		Westslope cutthroat trout	Wild	General	Maintain or expand populations of westslope cutthroat trout. Consider isolation of WCT populations if hybridization is a threat and habitat is sufficient to allow persistence. Provide angling opportunity including harvest for westslope cutthroat trout where possible.
		Lake trout, Northern pike, Yellow perch, Rainbow trout, Lake whitefish	Wild	General/Restrictive Regulations	Provide angling harvest opportunity.
Little Bitterroot Lake, Ashley Lake	2,970 acres 2,850 acres	Kokanee	Wild	Restrictive/Liberal Regulations	Evaluate harvest limits to increase the average size at harvest without noticeable reducing catch rates. Maintain kokanee egg-taking in Little Bitterroot Lake and limits to maintain over-size kokanee.
		Rainbow trout, Rainbow x cutthroat trout hybrid,	Hatchery/ Wild	Put-Grow-Take/ Quality	Evaluate stocking and/or harvest limits to produce trophy size fish and improved angler catch rates. Continue stocking triploid Gerrard

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
		Westslope cutthroat trout (N)			rainbow trout in Little Bitterroot Lake to produce a trophy fishery. Continue hybrid trout hatchery on Ashley Lake to increase abundance.
		Yellow perch	Wild	General	Provide angling harvest opportunity
Echo Lake, Lake Blaine	695 acres 382 acres	Kokanee	Hatchery/ Wild	Put-Grow-Take	Evaluate stocking and/or harvest limits to optimize angler catch rate.
		Rainbow trout	Hatchery	Put-Grow-Take	Evaluate stocking and/or harvest limits to optimize angler catch rate and assess stocking success.
Continued on next page		Largemouth bass	Hatchery	Restrictive Regulations	Provide angling harvest opportunity. Maintain bass regulations on Echo Lake to protect spawning fish and an abundant bass population.
		Yellow perch, Northern pike	Wild	General	Provide angling harvest opportunity
Small Valley Floor lakes	Each less than 350 acres	Largemouth bass, Yellow perch, Northern pike	Wild	General	Provide angling harvest opportunity.
		Westslope cutthroat trout (N), Rainbow trout, Brook trout, Grayling	Hatchery/Wild	General/Put-Grow-Take	Evaluate stocking and/or harvest limits to optimize angler catch rate. Complete EA to assess feasibility of stocking brook trout in selected closed basin lakes for angling and harvest opportunity for pan-sized fish.
Small mountain lakes	Each less than 350 acres	Westslope cutthroat trout (N), Rainbow trout, Brook trout, Grayling	Hatchery/ Wild	Put-Grow-Take/ General	Stock at a basic rate of 100 westslope cutthroat fingerlings every 3 years. Adjust stocking rates based on natural reproduction and fishing pressure to provide a range of fish sizes and catch rates. Replace non-native fish with westslope cutthroat when they threaten

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					downstream native fish populations. Leave some lakes intentionally fishless.
Family Fishing Ponds - Pine Grove, Shady Lane, Dry Bridge, Buffalohead	Each less than 5 acres	Westslope cutthroat trout (N), Rainbow trout	Hatchery	Put- Take/ Family Fishing	Provide angling harvest opportunity for youths and fishing opportunities for families emphasizing high catch rates and safe, convenient access to urban areas.
Flathead Lake	123,000 acres	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout.
		Westslope cutthroat trout (N)	Wild	Conservation/ Restricitve Regulations	Eliminate harvest and maintain or expand populations for conservation and catch and release cutthroat angling.
		Lake whitefish, Northern pike, Yellow perch, Lake trout, Rainbow trout	Wild	General/suppression	Provide angling harvest opportunity to reduce numbers to help meet native species goals. Coordinate with CSKT on lake trout management.
Lake Mary Ronan, Hubbart Reservoir	1513 acres 480 acres	Westslope cutthroat trout (N), Rainbow trout	Hatchery	Put-Grow-Take	Evaluate stocking and/or harvest limits to improve angler catch rate.
		Kokanee	Hatchery	Put-Grow-Take/ Restrictive Regulations	Evaluate stocking and/or harvest limits to optimize size of fish and angler catch rate. Maintain wild brood population in Lake Mary Ronan to provide kokanee for MT waters.
		Yellow perch	Wild	General	Provide angling harvest opportunity and reduce impacts on other game fish.


Upper Clark Fork River Drainage
Clark Fork River
Hoover Creek
Dog Creek
Little Blackfoot River
Spotted Dog Creek
Ontario Creek
Flint Creek
Boulder Creek
Rock Creek
Rock Creek Lake
Deer Lodge
Basin Creek
Philipsburg
Racetrack Creek
Boulder River
Silver Lake
Lost Creek
Amc Settling Pond #2
Amc Settling Pond #3
Warm Springs Creek
Tailings Pond
Anaconda
Tailings Pond
Browns Gulch
Mill Creek
Silver Bow Creek
Butte
German Gulch
Deep Creek
Basin Creek
Big Hole River
N
0 1.5 3
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

UPPER CLARK FORK RIVER DRAINAGE

PHYSICAL DESCRIPTION

The Upper Clark Fork River drainage lies near the heart of western Montana, and extends from its headwaters near Butte downstream to the mouth of Flint Creek.. The drainage includes the uppermost segment of the Clark Fork River and its tributaries, including Silver Bow Creek, Warm Springs Creek, and the Little Blackfoot River. The Clark Fork River begins at the junction of Silver Bow and Warm Springs Creeks, near the small community of Warm Springs. From its headwaters, the river flows northwesterly for approximately 70 miles through Deer Lodge, Powell, and Granite Counties. The Upper Clark Fork is bordered throughout much of its length by the Garnet Mountains to the north and east and the Flint Range to the south and west. The first 40 miles of the river meander through the flat plains of the Deer Lodge Valley where agriculture is the primary land use. Downstream from the mouth of the Little Blackfoot River, the Upper Clark Fork enters a narrow canyon. In this area the river channel has also been shortened by highway and railroad construction activities. However, downstream of Jens the river moves away from the transportation corridor and begins to meander downstream to its confluence with Flint Creek.

There are 76 lakes and reservoirs in the drainage, totaling 4,468 surface acres. Most natural lakes are mountain lakes in the Anaconda-Pintler and Flint Mountain Ranges. These lakes range in size from less than an acre to over 75 acres. A number of these lakes have been fitted with dams to increase storage capacity for downstream agricultural and industrial water users. The largest reservoirs in the drainage are the Warm Spring Settling Ponds, which are located near the beginning of the Clark Fork River, and Silver Lake, which is located at the head of the Warm Springs Creek drainage not far from the community of Anaconda.

FISHERIES MANAGEMENT

Located in the west-central part of the state, the Upper Clark Fork has a long history of mining related impacts that have negatively affected the fishery and aquatic resources along much of the river. This has led to the stream being one of the more underutilized rivers in western Montana. However, ongoing environmental cleanup by the State and the U.S. Environmental Protection Agency, as well as a diversity of recreational opportunities, has contributed to an increase in the Upper Clark Fork's popularity in recent years.

The Upper Clark Fork River is managed as a wild trout fishery, emphasizing natural reproduction. The basin is also the focus of native fish recovery efforts, particularly in the Little Blackfoot, Warm Springs and Silver Bow drainages. The Upper Clark Fork is home to ten native fish species including bull trout, westslope cutthroat trout, mountain whitefish, longnose and largescale sucker, northern pike minnow, peamouth, longnose dace, redside shiner, and Columbia slimy sculpin. Nonnative fish species with widespread distribution in the Upper Clark Fork include brown trout, rainbow trout, and brook trout. Nonnative lake trout and kokanee salmon can also be found in Silver Lake and Georgetown lakes, respectively. Dominant fish species vary from westslope cutthroat and brook trout in the headwaters, to brown trout in the Clark Fork River and the lower reaches of valley-bottom tributary streams.

Bull trout are very rare in the mainstem of the Upper Clark Fork River above Flint Creek. The species is primarily isolated in the Warm Springs Creek drainage near Anaconda. Bull trout historically occurred in other drainages such as the Little Blackfoot and Racetrack Creek, but fish are rare to absent in these areas at present. Most of the populations in the Warm Springs Creek drainage appear to be genetically isolated from these other drainages, with little intermixing occurring. Fluvial forms are rare. Adfluvial forms exist in Silver and Twin Lakes. Resident forms exist in most of the larger tributaries upstream of Anaconda including Barker, Foster, Twin Lakes, and Storm Lake Creeks.

Westslope cutthroat trout are present in many of the tributary streams in the Upper Clark Fork. Angling restrictions and habitat improvements in the Little Blackfoot and Silver Bow drainages have sought to improve westslope cutthroat numbers in these areas in particular. Many of the cutthroat populations in the Upper Clark Fork show little to no hybridization with introduced rainbow trout. Additionally, fluvial forms still remain in a number of locations. While westslope cutthroat trout are relatively uncommon in the mainstem of the Upper Clark Fork River, the species does provide a unique fishing opportunity in a river largely dominated by brown trout. Information is lacking on the abundance and life histories of mountain whitefish and non-game native fishes. Efforts are needed to describe these and monitor trends.

Angling in the Upper Clark Fork River occurs year-round and is most popular in the early spring, summer and fall. Opportunities exist for both wade and float angling and while fly-fishing is particularly popular, use of artificial lures and bait fishing are also common.

Lowland ponds and reservoirs provide valuable recreational fisheries. The Warm Springs and Job Corp Ponds are stocked primarily with rainbow trout, but westslope cutthroat trout and brown trout are also planted into some waters. Warm Springs Pond #3 is a popular location where anglers go to pursue trophy-sized trout. Racetrack Pond and the Kids Pond at the Warm Springs Wildlife Management Area are both stocked with rainbow and/or westslope cutthroat trout and have special fishing regulations that seek to provide quality angling opportunities for youth anglers.

A number of high mountain lakes are stocked with westslope cutthroat trout. Lakes currently planted on a regular basis include Alpine, Alibicaulis, Little Racetrack, and Upper and Lower Barker Lakes. Other lakes are planted on a more irregular basis depending on need, while other lakes are kept fishless to help conserve amphibian populations.

HABITAT

The Upper Clark Fork Basin has a long history of human disturbance beginning in earnest in the mid 1800s when placer mining for gold began on many basin streams. By 1896, copper had become the target metal and mining and smelting operations near the town of Butte, located near the headwaters of the Clark Fork, were processing thousands of tons of copper ore per day. Mining and smelting activities in the Butte and Anaconda areas continued into the early 1980s, and while some mining activity still persists near Butte to this day, most of the operations have now been completely shut down and abandoned. Nevertheless, the environmental consequences of over 100 years of large scale mining activity in the Upper Clark Fork Basin have left their mark. Enormous amounts of fine material, mostly mine tailings, were released into the drainage,

and were transported and deposited downstream. These tailings, containing heavy metals, proved toxic to aquatic life and negatively altered the aquatic biological community of the upper river.

For years, the Upper Clark Fork River was considered void of fish. It wasn't until efforts were made to retain and prevent the downstream movement of some portion of the toxic tailings in the Warm Springs Treatment Pond System that water quality improved to a level where trout could begin to re-colonize the lower sections of the river, upstream of Missoula. However, by that time, most of the trout in the river were nonnative species, including rainbow and brown trout. Brown trout have been shown to have a higher tolerance to metals and degraded habitat conditions than other trout species, and it is likely because of this that the species dominates the current trout community in much of the Upper Clark Fork River. While trout are fairly common in the upper river today, past research has shown that trout populations are only one fifth of what would be expected without contamination from mining wastes.

The Clark Fork River from its headwaters to the former Milltown Dam site was designated a Superfund Priority Site in 1986. While cleanup activities have been underway for a number of years on Silver Bow Creek near Butte as well as at Milltown Dam near Missoula, active remediation is only just beginning on the mainstem Clark Fork River. Cleanup of metals-contaminated soils along the Upper Clark Fork River is expected to improve water quality and allow for more tolerable conditions for fish and other aquatic life.

Other factors that affect habitat quality in the Upper Clark Fork include mid-summer dewatering. Irrigation withdrawal can have severe impacts on summer stream flows in the river upstream of Deer Lodge, especially during drought years. Low flows increase water temperatures to levels not suitable for trout, and extensive algae and aquatic plant growth impact dissolved oxygen levels along much of the river.

FISHING ACCESS

In the Upper Clark Fork above Flint Creek, there are relatively few FWP-owned or managed fishing access sites. Designated fishing access sites are located at Kohrs Bend upstream of Garrison, as well as on the lower Little Blackfoot River. There are additional public properties that serve as river and stream access, but these lands are not specifically managed for fishing access. Examples are MDT and county bridge crossings, DNRC and USFS ownership.

Regulations prohibit float fishing in the segment of the Clark Fork River from its beginning to the Perkins Lane Bridge, a distance of approximately three miles.

SPECIAL MANAGEMENT ISSUES

In recent years, recreational use of the Upper Clark Fork River has increased steadily. This is likely due to significant press related to ongoing and future efforts to restore the river's health from the devastating effects of mining contaminants on the river for more than a century. While much of the work still needs to be accomplished, the desire for a clean river to recreate on is apparent. Planning efforts by the Department of Justice (Natural Resource Damage Program), FWP, and others are underway to hopefully address the need for additional fishing access sites in the Upper Clark Fork.

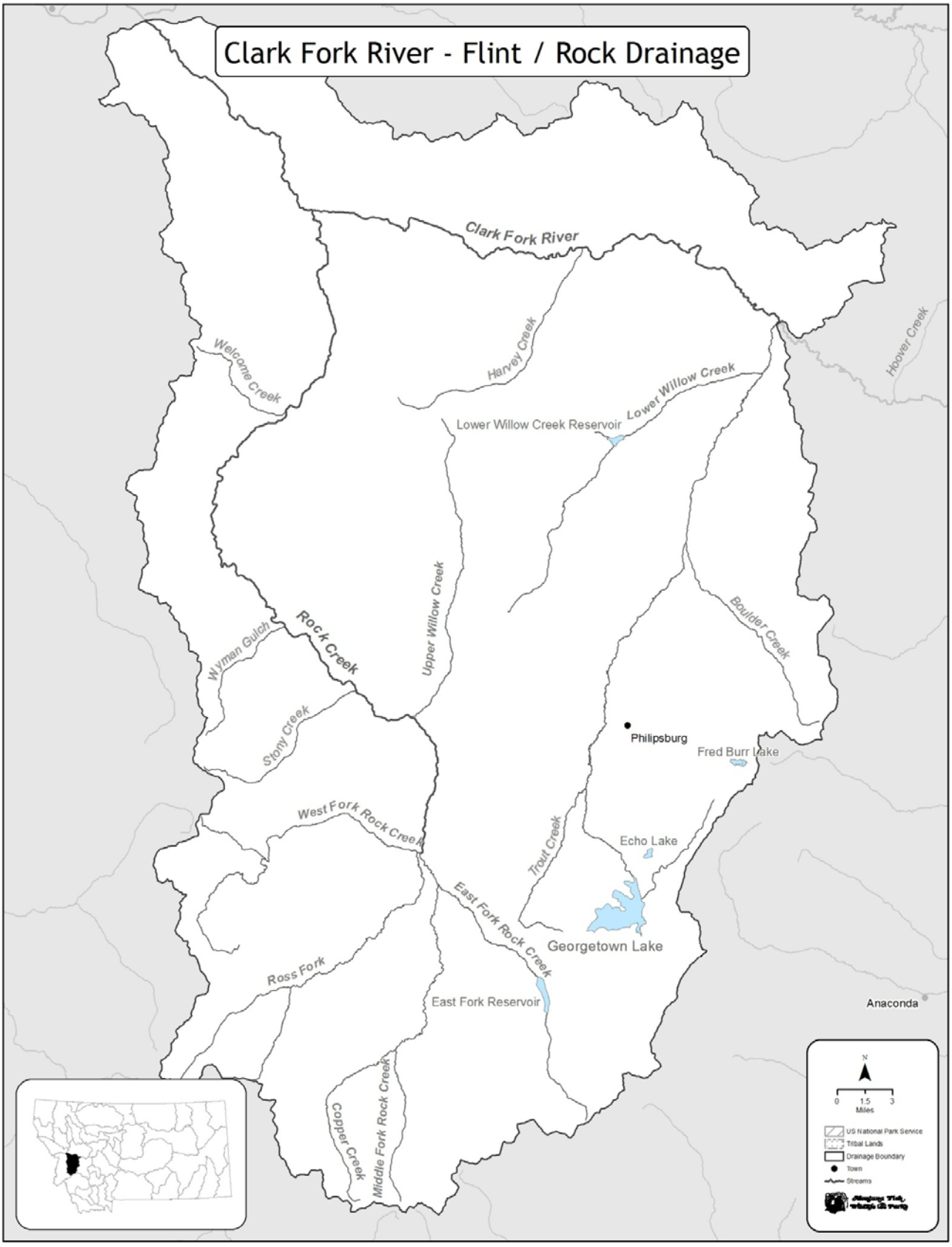
FISHERIES MANAGEMENT DIRECTION FOR UPPER CLARK FORK RIVER DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Silver Bow Creek and Tributaries	25 miles mainstem plus tributaries	Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Eliminate harvest and enhance fluvial populations for conservation and catch-and-release angling. Promote connectivity among tributary populations.
		Brook trout, Rainbow trout, Brown trout	Wild	General	Manage for the recovery of westslope cutthroat trout by continuing to allow liberal harvest of nonnative trout. Consider other options to reduce nonnative trout numbers if options are practical and would increase native trout density.
Habitat needs and activities: Clean up of mining contamination throughout reach. Increase instream flow and enhance habitat to support ecosystem function and production of native trout. Improve water quality of Butte Metro Sewage Treatment Plant discharge. Install a barrier on the mainstem (just below German Gulch) to prevent colonization of brown trout and rainbow trout, and allow for a westslope cutthroat trout fishery to develop.					
Warm Springs Creek and Tributaries	30 miles mainstem plus tributaries	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance migratory and resident populations for conservation.
		Westslope cutthroat trout (N)	Wild	Conservation	Preserve existing genetics in currently isolated resident populations. Improve migratory populations for angling and conservation.
		Brown trout, brook trout, Rainbow trout	Wild	General	Manage for harvest opportunity and reduce numbers to lessen competition, hybridization with, and predation on native trout. Above Meyers Dam, consider other options to reduce numbers if options would increase native trout density and WCT angling opportunity.
Habitat needs and activities: Clean up of mining contamination downstream of Anaconda. Secure instream flow and enhance habitat to support ecosystem function and production of trout and whitefish. Manage connectivity to favor native trout, particularly bull trout.					

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Silver Lake	300 acres	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance adfluvial population for conservation.
		Westslope cutthroat trout (N)	Wild	Conservation	Enhance population for conservation and to provide angling opportunity.
		Rainbow trout, Brook trout, Lake trout	Wild	General	Allow liberal harvest to reduce competition and hybridization with, and predation on native trout. Consider other options to reduce numbers if options would increase native trout density and WCT angling opportunity.
Habitat needs and activities: Better public access needed. Manage connectivity with Storm Lake Creek to favor adfluvial bull trout moving upstream to spawn. Pursue leasing or purchasing stored water to supplement Warm Springs Creek and the Clark Fork River.					
Clark Fork River Headwaters Downstream to Confluence with Flint Creek.	70 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Continue yearlong closure on angling for bull trout. Enhance migratory populations for conservation. Enhance catch-and-release westslope cutthroat trout fishery.
		Brown trout, Rainbow trout, Brook trout	Wild	Quality/ Restrictive Regulations	Manage harvest to support quality angling opportunity. Ensure adequate connectivity with important spawning tributaries to provide for natural recruitment.
Habitat needs and activities: Clean up mining contamination throughout reach. Enhance instream flow. Enhance connectivity with tributaries where appropriate. Protect and improve habitat quality in spawning and rearing areas to enhance natural recruitment of wild and native trout and whitefish.					
Warm Springs and Job Corps Ponds	897 acres	Rainbow trout, Brown trout, Westslope cutthroat trout (species not present in all ponds)	Hatchery	Quality	Restrict trout harvest and manage stocking densities to promote quality catch-and-release angling opportunity for large trout.
Habitat needs and activities: Improve water quality of ponds. Slow eutrophication process by improving water quality of Butte Metro Sewage Treatment Plant discharge. Understand the effects of stored contaminants on the biota in and downstream of the Warm Springs Ponds.					

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Racetrack Pond Kids Pond at Warm Springs Wildlife Management Area Gravel Pit Pond adjacent to Highway 48	45 acres	Rainbow trout, Westslope cutthroat trout	Hatchery	Family Fishing	Encourage youth angling through special regulations (Racetrack Pond and Warm Springs WMA Kids Pond), or special fishing day events (Gravel Pit Pond). Manage stocking densities and trout harvest to promote quality angling opportunity for stocked trout.
Little Blackfoot River and Tributaries	50 miles mainstem plus tributaries	Westslope cutthroat trout (N)	Wild	Conservation/ Restrictive Regulations	Eliminate harvest and conserve and enhance migratory and resident populations for conservation and catch-and-release angling. Consider isolation of local populations only if hybridization or competition is a threat and habitat and fish numbers are sufficient to allow persistence.
		Brown trout, Brook trout, Rainbow trout	Wild	General	Manage for harvest opportunity and reduce numbers to lessen competition and hybridization with, and predation on native trout, particularly above Elliston where westslope cutthroat trout are abundant. Consider other options to reduce numbers if they would increase native trout density and angling opportunity.
Habitat needs and activities: Protect and improve habitat to support ecosystem function and natural production of native trout and whitefish. Manage connectivity to favor native trout.					
Tributaries to Upper Clark Fork River Above Confluence with Flint Creek, Other Than	---	Westslope cutthroat trout (N)	Wild	Conservation	Enhance populations for conservation and recruitment to the Clark Fork River sport fishery. Maintain currently isolated (or consider isolating) populations only if hybridization or competition is a threat and habitat is sufficient to allow persistence. Preserve connectivity with

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Those Specifically Listed					streams currently connected to allow for maintenance of migratory life histories. Monitor these populations closely for hybridization and/or competition threats.
		Brown trout, Rainbow trout, Brook trout	Wild	General	In streams with westslope cutthroat trout, continue to allow liberal harvest to reduce competition, hybridization and predation. Consider other options to reduce numbers if options and would increase native trout numbers and angling opportunity. Where native species concerns are not present, enhance migratory populations to improve recruitment to recreational fishery in the Clark Fork River.
Habitat needs and activities: Protect and improve habitat to support ecosystem function and natural production of trout. Manage connectivity to favor native trout.					


Clark Fork River - Flint / Rock Drainage
Clark Fork River
Welcome Creek
Harvey Creek
Hoover Creek
Lower Willow Creek
Lower Willow Creek Reservoir
Upper Willow Creek
Wyman Gulch
Rock Creek
Boulder Creek
Stony Creek
Philipsburg
Fred Burr Lake
West Fork Rock Creek
Trout Creek
Echo Lake
East Fork Rock Creek
Georgetown Lake
Ross Fork
East Fork Reservoir
Anaconda
Copper Creek
Middle Fork Rock Creek
N
0 1.5 3
Miles
US National Park Service
Tribal Lands
Drainage Boundary
Town
Streams

CLARK FORK RIVER FLINT/ROCK DRAINAGE

GENERAL DESCRIPTION

The Clark Fork Flint/Rock Creek drainage includes three distinct sub-drainages: Flint Creek, Rock Creek, and the section of the Clark Fork River from its confluence with Flint Creek to its confluence with the Blackfoot River. At the mouth of Flint Creek near the town of Drummond, the Clark Fork flows through a wide valley with the surrounding lands used primarily for agriculture. A few miles downstream, the Clark Fork Valley narrows and the river, in this reach, is confined by the I-90 Interstate and the railroad. Below the mouth of Rock Creek near the town of Clinton, the Clark Fork Valley widens again, allowing the river to flow more freely with less impact from transportation corridors, until it reaches the mouth of the Blackfoot River.

Flint and Rock Creeks are major tributaries to the Clark Fork River. Flint Creek enters the Clark Fork River near the town of Drummond. Flint Creek Dam impounds North Fork Flint Creek and forms Georgetown Lake, a hydropower reservoir, about 9 miles south of Philipsburg. Below Flint Creek Dam, the creek flows through agricultural lands used primarily for cattle and hay production. Water diverted from Flint Creek is a major source of water used for irrigation in the drainage. Rock Creek enters the Clark Fork River approximately 5 river miles upstream of the town of Clinton and 34 river miles downstream of Drummond. The headwaters of Rock Creek begin at the Continental Divide with mainstem Rock Creek beginning at the confluence of three major tributaries: Middle Fork Rock Creek, Ross Fork Rock Creek and West Fork Rock Creek. From its headwaters, Rock Creek flows approximately 52 river miles to its confluence with the Clark Fork River. The USFS is the primary land owner in the drainage, although significant portions of the valley bottom is owned by private landowners in the upper and lower reaches of the drainage.

There are 46 natural lakes and reservoirs, totaling 4,468 surface acres, in the Flint-Rock drainage including many mountain lakes. The largest flatwater body is Georgetown Lake which impounds North Fork Flint Creek and is approximately 2,080 surface acres. East Fork Reservoir is the next largest flatwater body and impounds East Fork Rock Creek. The reservoir serves as storage for irrigators in the Flint Creek Valley. A majority of the water stored in reservoir is diverted into the Flint Creek Canal just below the reservoir and delivered to irrigators in the Flint Creek Valley via a trans-basin diversion into Trout Creek, a tributary of Flint Creek. This water is used by irrigators throughout the Flint Creek Valley, but most of the water users are located in the lower Flint Creek drainage and gain access to the water via the Allendale diversion and ditch. Mountain lakes can be found throughout the Rock Creek drainage but the majority is found in the headwaters of the drainage, including several in the Anaconda Pintler Wilderness. The Flint Creek drainage also has many mountain lakes with the highest density being in the Flint Mountain Range.

FISHERIES MANAGEMENT

Clark Fork River

The portion of the Clark Fork River in the Flint-Rock Creek drainage has a long history of mining- related impacts associated with mining and smelting operations in the Butte and Anaconda area. These operations negatively impacted the river's fishery resources and have led to this river being one of the more underused rivers in western Montana.

The Clark Fork River is managed as a wild trout fishery, emphasizing natural reproduction. The Upper Clark Fork is home to ten native fish species including bull trout, westslope cutthroat trout, mountain whitefish, longnose and largescale sucker, northern pikeminnow, peamouth, longnose dace, redside shiner, and sculpin (Cottus spp.). Nonnative fish species inhabiting the Upper Clark Fork include brown trout, rainbow trout, and brook trout. Brown trout are the primary recreational fish in the Clark Fork River downstream of Flint Creek, although westslope cutthroat trout and rainbow trout are also common. Information is lacking on the abundance and life histories of mountain whitefish and non-game native fishes. Efforts are needed to describe these species and monitor their trends.

Bull trout and westslope cutthroat trout are at low densities in the mainstem of the Clark Fork River downstream of Flint Creek. Spawning and rearing streams for bull trout include Harvey Creek, Boulder Creek, and Rock Creek and its tributaries. Westslope cutthroat trout are found in several tributaries to this section of the Clark Fork. Densities of cutthroat are lower in the mainstem reach from Flint Creek to Bearmouth than downstream of Bearmouth. Many westslope cutthroat trout populations are found in tributaries to the Clark Fork River below Flint Creek. Some of these tributaries are physically and biologically connected to the mainstem and help with maintaining the fluvial population in the river. Others tributaries have barriers and block the return of adults to their natal streams. However, these barriers do protect the tributary populations from introgression with rainbow trout and rainbow/westslope cutthroat trout hybrids, and prevent colonization by nonnative species.

Angling occurs year-round on the Clark Fork River but is most popular in the early spring, summer and fall. Opportunities exist for both wade and float angling and while fly-fishing is the most popular form of use, artificial lures and bait fishing are also common. Beavertail Pond provides a flatwater fishing opportunity and attracts a significant amount of angling pressure. Beavertail pond is managed as a put-and-take trout fishery for kids and family fishing.

Flint Creek

Flint Creek is a major tributary to the Clark Fork River that serves as an important recreational fishery. Fishing pressure is not as high as found in other important recreational fisheries in the area including Rock Creek, Georgetown Lake and the Clark Fork River. Poor public access to much of Flint Creek is one reason for the low fishing pressure.

Flint Creek is managed as a wild trout fishery, emphasizing natural reproduction. Brown trout are the most abundant salmonid and are the primary recreational fish. Native westslope cutthroat and bull trout are present in the drainage, however bull trout are only found in the Boulder Creek drainage and mainstem Flint Creek. Westslope cutthroat trout are found in the mainstem and in many tributaries of Flint Creek. Several westslope cutthroat trout populations in the drainage are protected from hybridization with rainbow trout by fish passage barriers. The largest genetically-pure population is located in the Lower Willow Creek drainage, above Lower Willow Creek Dam. Other native fish species found in the Flint Creek Drainage include

mountain whitefish, largescale and longnose suckers, northern pikeminnow, longnose dace, redside shiner, and sculpin (Cottus spp.). Nonnative fish species present in the drainage include brown, rainbow, and brook trout. Information is lacking on the abundance and life histories of mountain whitefish and non-game native fishes. Efforts are needed to describe these species and monitor their trends.

Georgetown Lake is the largest flatwater body in this drainage and is one of the most popular trout fisheries in the state. It is managed as a put-and-grow fishery for rainbow and brook trout and as a wild kokanee salmon fishery. Georgetown Lake routinely ranks in the top 10 in Montana for angling pressure and is equally as important as both a summer and winter ice-fishing destination. Irrigation and flood control are other uses of Georgetown Lake that influence water management in this system.

Other lakes stocked in the Flint Creek drainage include Lower Boulder Lake, Stewart Lake and Echo Lake. Both Stewart and Echo Lakes can be accessed by road while Lower Boulder is a back country lake. Many other high mountain lakes in the Flint Creek drainage provide fisheries but are sustained by natural reproduction. Several other lakes in the drainage are fishless and will likely be managed as fishless in the future to provide habitat to conserve other native populations (e.g., amphibians).

Rock Creek

Rock Creek is one of twelve renowned “Blue Ribbon” rivers in Montana and is one of the state’s most popular rivers for recreation. The river’s exceptional fish populations and abundant public land (allowing for excellent public access), combined with its proximity to Missoula, contribute to its popularity.

Rock Creek is managed as a wild trout fishery, emphasizing natural reproduction and is also a stronghold for native bull trout and westslope cutthroat trout. Other native fish species found in the drainage include mountain whitefish, largescale and longnose suckers, northern pikeminnow, longnose dace, and sculpin (Cottus spp.). Nonnative fish species present in the drainage include brown trout, rainbow trout, brook trout, and grayling. Brown trout provide a majority of the sport fishery in the Rock Creek drainage, although westslope cutthroat are abundant in the upper mainstem and also provide an excellent fishery. Rainbow trout once provided a majority of the recreational fishery throughout the drainage until whirling disease became prevalent and their numbers decreased in the early 1990s. Rainbow trout are still abundant in the lower portion of the drainage and provide a significant recreational fishery, although their densities are much lower now than was observed before whirling disease. The decline in rainbow trout densities is even more pronounced in the upper drainage where they now make up only a small portion of the fishery. Brown trout have increased throughout the mainstem and replaced rainbow trout as the most abundant salmonid. Information is lacking on the abundance and life histories of mountain whitefish and non-game native fishes. Efforts are needed to describe these species and monitor their trends.

Bull trout are found throughout mainstem Rock Creek and comprise a large meta-population with fish moving throughout the drainage to complete their life history. This population also contributes bull trout to the Clark Fork River. Spawning and rearing tributaries are found throughout the drainage with most of the stronger populations located closer to the headwaters.

The largest bull trout population in the drainage is found in East Fork Reservoir. This population is an adfluvial population that uses East Fork Rock Creek for spawning and rearing and juveniles eventually outmigrate to the reservoir where they reside as sub-adults and adults. A large amount of spawning also occurs annually in a portion of East Fork Rock Creek routinely inundated by stored water from East Fork Reservoir. This spawning is likely a consequence of East Fork Rock Creek being intermittent approximately a half mile above the reservoir, eliminating upstream passage during summer low flow periods. The amount of recruitment that is provided to the reservoir from the inundated reach is unknown.

Westslope cutthroat trout are also found throughout the Rock Creek drainage, and similar to bull trout, are a meta-population with fish moving throughout the drainage and Clark Fork to complete their life history. Spawning and rearing tributaries are found throughout the drainage. Most tributaries in the Rock Creek drainage that maintain enough stream flow for fish to spawn and rear also sustain a westslope cutthroat trout population. Fluvial westslope cutthroat trout are found throughout the mainstem and are most abundant in the upper portion of the drainage. Rock Creek above Windlass Bridge consistently maintains high enough densities to provide an excellent recreational fishery. Westslope cutthroat trout populations in the Rock Creek drainage are well connected with very few tributaries having fish passage barriers. While this connectivity allows for gene flow between populations, very few westslope cutthroat trout populations in the drainage are protected from colonization by introduced trout and hybridization.

Angling occurs year-round and is most popular in the spring, summer and fall. Opportunities exist for both wade and float angling, although float fishing is only allowed on Rock Creek from December 1 through June 30. This regulation was put into place to allow for floating during high flows when multiple stonefly hatches are occurring, but protects wade anglers from disturbance by float anglers during low flows when most locations on Rock Creek are accessible via wading. Fly fishing is the most popular form of fishing on Rock Creek, although other artificial lures are also common. Bait fishing on Rock Creek is only allowed for anglers 14 years of age and younger.

Of the lakes and reservoirs in the Rock Creek drainage, East Fork Reservoir receives the most angling pressure. East Fork Reservoir provides an excellent put-and-grow fishery for large westslope cutthroat trout as well as a few large, wild rainbow trout. A westslope cutthroat trout stocking program was initiated for this reservoir in 2004 and has been very successful in establishing a popular recreational fishery. Other mountain lakes in this drainage provide westslope cutthroat trout fisheries, although Fuse Lake does provide a self-sustaining Arctic grayling population.

Several other lakes are stocked with fish in the Rock Creek drainage including Green Canyon Lake, Whetstone Lake and Moose Lake. Moose Lake can be accessed by road while both Green Canyon and Whetstone Lakes are back-country lakes. Many other high mountain lakes in the Rock Creek drainage provide fisheries but are sustained by natural reproduction. Several other lakes in the drainage are fishless and will likely be managed as fishless in the future to promote conservation of native aquatic communities.

HABITAT

Clark Fork River

The Upper Clark Fork Basin has a long history of human disturbance beginning in earnest in the mid 1800s when placer mining for gold began on many basin streams. By 1896, copper had become the target metal, and mining and smelting operations near the town of Butte were processing thousands of tons of copper ore per day. Mining and smelting activities in the Butte and Anaconda areas continued into the early 1980s, and while some mining activity still persists near Butte to this day, most of the operations have now been shut down and abandoned. Nevertheless, the environmental consequences of over 100 years of large scale mining activity in the Upper Clark Fork Basin have left their mark. Enormous amounts of fine material, mostly mine tailings, were released into the drainage, and were transported and deposited downstream throughout the river system. These tailings proved toxic to aquatic life and negatively altered the aquatic biological community of the upper river.

For years, the Upper Clark Fork River was considered void of fish. It wasn't until efforts were made (beginning in 1911 and later in the 1990s) to retain and stop downstream movement of a portion of the toxic tailings in the Warm Springs Treatment Pond System, that water quality improved to a level where trout could begin to re-colonize the river upstream of Missoula. By then, most of the trout in the river were rainbow and brown trout. Brown trout have been shown to have a higher tolerance to metals and degraded habitat conditions than other trout species, and is likely the reason the species dominates the current trout community in much of the Upper Clark Fork River. While trout are fairly common in the upper river today, past research has shown that trout populations are only one fifth of what would be expected without contamination from mining wastes.

The Clark Fork River from its headwaters to the former Milltown Dam site was designated a Superfund Priority site in 1986. While cleanup activities have been underway for a number of years on Silver Bow Creek near Butte as well as at Milltown Dam near Missoula, active remediation is only just beginning on the mainstem Clark Fork River. Cleanup of metals-contaminated soils along the Upper Clark Fork River is expected to improve water quality and allow for more tolerable conditions for fish and other aquatic life. The reach of the Clark Fork downstream of Rock Creek has better water quality because of the addition of water from Rock Creek.

Other factors that affect habitat quality in the Upper Clark Fork include mid-summer dewatering. Irrigation withdrawal can have severe impacts on summer stream flows in the river upstream of Deer Lodge, especially during drought years. These factors likely affect habitat conditions in the Clark Fork River below Flint Creek through the cumulative impacts of high water temperatures and poor water quality. Surprisingly, trout densities are lower in the reach from Flint Creek to the mouth of Rock Creek than are observed in the reaches above and below. It is unknown what causes this reduction. The factors that limit the fish populations in the reach are unclear. Extensive channelization from the development of I-90 and two railroads has significantly reduced sinuousity and extensively altered natural alluvial processes in this reach. These

activities have significantly changed the fish habitat in this reach and may potentially impact fish populations. Trout densities do improve substantially again below the mouth of Rock Creek.

Flint Creek

Agriculture and mining have a played a significant role in the history of the Flint Creek Valley. Currently, the majority of land use in the Flint Creek drainage is agriculture with a focus on cattle and hay production. Flint Creek below the Allendale diversion is significantly dewatered during irrigation season which is likely the primary limiting factor for fish populations in the reach, particularly during drought years. Dewatering does not appear to be a major factor on Flint Creek above the Allendale diversion due to abundant water being delivered from East Fork Rock Creek into the Flint Creek drainage. Fish entrainment into diversion ditches also occurs throughout the drainage which also impacts fish populations in most reaches of Flint Creek. Other impacts of agriculture on Flint Creek include riparian grazing that reduces woody riparian vegetation and decreases channel stability. Mining has also significantly impacted fish habitat conditions in the Flint Creek Valley with several tributaries displaying mining-related habitat degradation including Lower Willow Creek, Douglas Creek (near Hall), Henderson Creek, Douglas Creek (near Philipsburg), Fred Burr Creek and North Fork Flint Creek.

Habitat conditions in Georgetown Lake are also a significant concern in the Flint Creek drainage. Georgetown Lake is a shallow, productive reservoir which allows it to produce excellent rainbow trout, brook trout and kokanee salmon fisheries. However, these factors also create conditions that can be detrimental to these fisheries. Georgetown Lake is a high elevation (6,400 ft) reservoir that maintains ice cover for an extended period of time; typically from early November through mid-May. During the winter, there is minimal diffusion of oxygen into the lake due to ice and snow cover, along with significant consumption of oxygen due to the decomposition of macrophytes and detritus along the substrate. Over the course of the winter, the combination leads to significant depletions of oxygen throughout the water column, creating poor habitat conditions for the trout and salmon in the lake. These conditions can be exacerbated if water levels are drawn down too low during the previous year's operation. Thus, water management at Georgetown Lake via Flint Creek Dam operations is critical to providing adequate water to avoid poor water quality and maintaining healthy trout and salmon fisheries.

Rock Creek

The Rock Creek drainage maintains excellent fish habitat and water quality, largely due to the extensive public land ownership in the drainage which is generally managed to provide quality fish and wildlife habitat. The upper portion of the Rock Creek drainage is largely managed for livestock ranching. Impacts to fish populations in this portion of the drainage include irrigation withdrawal and the associated entrainment of fish and also reduced riparian over-story vegetation. The middle portion of the drainage (Windlass Bridge to the mouth of Welcome Creek) is nearly entirely owned by the USFS and the habitat in this reach is in excellent condition with the main impact being a riparian road that is adjacent to the creek through much of this reach. The lower portion of Rock Creek below Welcome Creek is again primarily privately owned in the valley bottom with a majority of the land use being residential subdivisions. Temperature monitoring in the drainage indicates that water temperatures are as high at Windlass Bridge (river mile 37.5) as are observed near the mouth of the drainage (river mile 0). This indicates that impacts to the fishery that cause increased temperature are greatest in

the upper portion of the drainage and improve lower in the drainage. It is suspected that the reduction in irrigation, improvement in riparian habitat conditions, and supply of cold water from tributaries in the middle reach of the drainage improves water temperatures and overall fish habitat.

The conservation value of Rock Creek has long been recognized by FWP and the citizens of western Montana. Thus, several land conservation projects have been completed in the upper portion of the drainage, mostly in the form of conservation easements. These projects include several large ranches that provide contiguous habitat with some of the easements requiring protective management of the riparian habitat. Future projects that protect additional parcels in both upper and lower Rock Creek should be high priority, particularly if they are adjacent to existing conservation easements. FWP also has a Murphy Water Right on Rock Creek which protects a minimum base flow in the river, although it is rarely necessary to exert this right due to the private ranching acreage being relatively small in the drainage.

FISHING ACCESS

Public access on the Clark Fork River from Flint Creek to the mouth of the Blackfoot River is currently relatively good. Fishing access sites owned by FWP on the Clark Fork River are located near Drummond, Bearmouth, Beavertail, Clinton (Schwatz Creek FAS), Turah, and Bonner (Milltown Dam State Park). The Milltown Dam State Park near Bonner is currently in the developmental phase but will be open to public use in the near future. A BLM-owned fishing access site is also available to anglers near mile marker 7 on the Drummond frontage road between Drummond and Bearmouth. In addition, there are several undeveloped sites along the Clark Fork River in this reach that are currently used by anglers, but access is not guaranteed due to private ownership. Beavertail Pond is another site owned by FWP in this reach that provides access for flatwater fishing for kids and families. While public access is currently good in this reach, additional planning efforts are underway to improve access further including potential funding from the Department of Justice (Natural Resource Damage Program--NRDP) for acquisition of properties and improvements to current sites.

There are currently no FWP-owned or managed fishing access sites on Flint Creek. One access point has recently been improved by FWP through a cooperative agreement with a private landowner, but access is at the discretion of the landowner. The only other public access to Flint Creek currently is the use of public lands such MDT and county bridge crossings, DNRC ownership, etc. FWP has initiated discussions with the local watershed group to work on improving access on Flint Creek, but very few projects have been identified. Planning efforts by the NRDP and FWP are underway to provide funding for development of accesses on Flint Creek, should the opportunity arise. Fishing access is abundant on Georgetown Lake including the Stuart Mill Fishing Access Site owned by FWP and multiple access sites owned by the USFS.

Fishing access in the Rock Creek drainage is excellent. The entire middle portion of the drainage is owned and managed by the USFS allowing for open access to anglers and recreationalists. Several fishing access sites are also present in the lower portion of the drainage including parcels of public land, developed fishing access sites and multiple access points via the Rock Creek Road right-of-way. Overall, very few stretches of the lower and middle reaches of Rock Creek are inaccessible to anglers willing to hike and wade. Access to Upper Rock Creek is somewhat

more difficult due to the extensive private land ownership. However, FWP has recently leased one site in this reach and is in the process of developing another site for public access. Public land in-holdings and conservation easements negotiated to allow public access also provide access for anglers to the upper drainage.

SPECIAL MANAGEMENT ISSUES

Social Conflicts on Rock Creek

The primary social conflict present in Rock Creek is float fishing. Several residents in upper Rock Creek would like to see float fishing either more regulated or shifted to other parts of the drainage. Some wade anglers also support either limiting or eliminating float fishing in Rock Creek due to floaters making it difficult to wade fish. The current regulations which limits float fishing from December 1- June 30 prevents a majority of the conflict between wade anglers and float anglers, as most floaters are using the river during high flows when it is difficult to wade. Nonetheless, there will always be some parties that are dissatisfied with floating on Rock Creek.

Fishing derbies have occasionally been proposed on Georgetown Lake and consistently opposed by sportsman's groups and lake homeowners for the past couple of decades. Typically the only proponent of these contests has been the applicant. FWP proposes that derbies no longer be allowed on Georgetown Lake.

FISHERIES MANAGEMENT DIRECTION FOR CLARK FORK RIVER - FLINT/ROCK DRAINAGE

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Clark Fork River (Flint Creek Mouth-Blackfoot River Mouth) and Tributaries	52 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue year long closure on angling for bull trout. Enhance migratory populations for conservation. Enhance catch-and-release WCT fishery.
		Brown trout, Rainbow trout	Wild	General	Consider liberal regulations to allow for harvest opportunity and reduce numbers to lessen competition with and predation on native trout if habitat conditions improve for native trout.
		Brook trout	Wild	General	Maintain liberal harvest limits to support native species goals by reducing competition and hybridization.
Habitat needs and activities: Continue efforts to clean up mining contamination in upper portion of the drainage. Enhance in-stream flows where possible and improve riparian habitat and grazing management where appropriate. Protect and improve habitat quality in spawning and rearing areas to enhance natural recruitment of wild and native trout. Gain a better understanding of factors limiting trout populations in reach between the mouth of Flint Creek and the mouth of Rock Creek.					
Flint Creek	41 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance fluvial populations of WCT for conservation and angling.
		Rainbow trout, Brown trout	Wild	General	Manage for harvest opportunity.
		Brook trout	Wild	General	Maintain liberal harvest limits to support native species goals by reducing numbers and competition and hybridization.
Habitat needs and activities: Enhance in-stream flows below Allendale Diversion. Reduce fish entrainment particularly below the mouth of Boulder Creek. Improve riparian habitat and grazing management throughout the drainage.					

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Georgetown Lake	2,080 acres	Rainbow trout	Hatchery	Put-Grow-Take	Manage stocking to support quality angling and liberal harvest opportunity.
		Brook trout	Hatchery	Quality	Maintain current natural reproduction and supplement with hatchery fish to provide adequate fish densities for anglers. Implement harvest limits and stocking rates that provide for quality sized fish.
		Kokanee salmon	Wild	Liberal regulations	Maintain liberal harvest limits to attain quality sized fish and high angler catch rates.
		All species	N/A	N/A	Prohibit fishing contests to reduce social conflicts with other anglers.
Habitat needs and activities: Continue to work with dam operators to maintain sufficient over-winter pool elevations and improve other dam operations to minimize the impact chronic low winter dissolved oxygen levels have on fish populations.					
Boulder Creek	14 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance migratory and resident populations of WCT for conservation and angling.
		Brown trout, Rainbow trout, Brook trout	Wild	General	Allow liberal harvest to reduce numbers and lessen hybridization and competition with native trout. Consider other options to reduce numbers if options would increase native trout density and angling opportunity.
Habitat needs and activities: Minimize entrainment of fish into diversion ditches in the lower portion of the drainage and improve riparian habitat conditions where appropriate.					
Flint Creek Tributaries- Other than Boulder Creek	36 miles	Westslope cutthroat trout (N)	Wild	Conservation	Enhance populations for conservation. Maintain isolation of WCT populations protected by barriers to upstream fish passage if habitat and numbers are sufficient to allow persistence. Maintain connectivity to streams

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
					currently connected to allow for maintenance of migratory life histories and mainstem angling opportunities.
		Brown trout, Rainbow trout, Brook trout	Wild	General	Maintain liberal harvest and consider measures that reduce their abundance in reaches protected by a barrier or in reaches considered native species strongholds. Enhance rainbow and brown trout populations that provide recruitment to Flint Creek or the Clark Fork River and are not located in reaches with abundant native trout
Habitat needs and activities: Improve riparian habitat conditions and reduce fish entrainment particularly in reaches that maintain native trout populations or important migratory non-native trout populations. Improve in-stream flows in reaches that are currently dewatered and support clean-up efforts in drainages with mining impacts.					
Harvey Creek	15 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance migratory and resident life histories for conservation and westslope cutthroat trout angling. Maintain barrier to protect populations from invasion by brown trout and rainbow trout.
		Rainbow trout, Brown trout	Wild	General	Allow liberal harvest. Consider other options to reduce numbers if options would increase native species numbers and angling opportunity.
Habitat needs and activities: Continue to improve riparian habitat via grazing management. Reduce entrainment of out migrating fish and potentially implement selective upstream fish passage for bull trout at the barrier near the mouth.					
East Fork Reservoir and East Fork Rock Creek above Reservoir	370 acres and 5 miles	Bull trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout and enhance adfluvial populations for conservation.
		Westslope cutthroat trout (N)	Wild/	Quality	Manage for harvest opportunity of quality sized

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
			Hatchery		fish. Evaluate stocking to determine return to creel and assess expansion of population in upstream tributaries
		Rainbow trout, Brook trout	Wild	General	Allow liberal harvest. Consider other options to reduce numbers if options would increase native trout density and angling opportunity.
Habitat needs and activities: Work to maintain minimum reservoir levels to improve overwinter habitat conditions and reduce entrainment of bull trout through the dam. Assess improving surface water flow in East Fork Rock Creek above East Fork Reservoir to improve access for bull trout to upstream spawning habitat, should feasible methods arise.					
East Fork Rock Creek- Below East Fork Dam	8 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance fluvial and resident populations for conservation.
		Brown trout, Rainbow trout, Brook trout	Wild	General	Allow liberal harvest. Consider other options to reduce numbers if options would increase native trout density and WCT angling opportunity.
Habitat needs and activities: Reduce native fish entrainment by screening the Flint Creek Main Canal. Improve habitat conditions below the reservoir by improving in-stream flows and maintaining periodic flushing flows. Improve riparian habitat and reduce entrainment of native fish where appropriate.					
Rock Creek	62 miles	Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance fluvial populations of WCT for conservation and angling.
		Rainbow trout	Wild	Restrictive Regulations	Maintain catch-and-release regulations in attempt to improve numbers while recognizing that whirling disease is likely the primary limiting factor.
		Brown trout	Wild	Liberal Regulations	Maintain liberal harvest regulations to allow for harvest opportunity and reduce numbers to lessen competition with and predation on native trout.

Water	Miles/acres	Species	Recruitment Source	Management Type	Management Direction
Habitat needs and activities: Continue efforts to protect private lands via conservation easements and land acquisition. Improve riparian habitat and grazing management in drainage where appropriate. Reduce entrainment of native and wild fish into irrigation ditches.					
Rock Creek Tributaries		Bull trout (N), Westslope cutthroat trout (N)	Wild	Conservation	Continue yearlong closure on angling for bull trout. Enhance fluvial and resident populations of WCT for conservation and angling.
		Brown trout, Rainbow trout, Brook trout	Wild	General	Allow liberal harvest. Consider other options to reduce numbers if options would increase native trout density and WCT angling opportunity.
Habitat needs and activities: Improve riparian habitat where appropriate and reduce entrainment of native fish where necessary.					
Tributaries to the Clark Fork River (Other Than Harvey Creek, Flint Creek and Rock Creek)		Westslope cutthroat trout (N)	Wild	Conservation	Enhance migratory and resident populations for conservation and angling. Maintain isolation of populations protected by barriers if habitat and fish abundance are sufficient to allow persistence. Maintain connectivity to streams currently connected to allow for migratory life histories and mainstem angling.
		Rainbow trout, Brown trout, Brook trout	Wild	General	Maintain liberal harvest and consider measures that reduce their abundance in reaches protected by a barrier or in reaches considered native species strongholds. Enhance rainbow and brown trout populations that provide recruitment to the Clark Fork River and are not located in reaches with abundant native trout.
Habitat needs and activities: Improve degraded riparian habitat particularly in stream reaches where native salmonids are present. Reduce fish entrainment particularly at locations where native fish are routinely entrained.					